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Effects of Government Expenditure, Credit and Tax
Policies on the Economic Development of Iran
with Special Reference to the 1960-76
Period

By

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Vol.1

A Thesis Submitted for the Ph.D.(Economics) Degree at the
University of Keele, 1979

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ABSTRACT

Iran is one of the best case studies among the oil producing countries in which the effects of oil revenue can be examined. While it has some of the basic characteristics of developing countries, it is endowed with enormous wealth. A combination of these factors has increased the role of the government in economic development by granting a greater possibility of spending and manoeuvrability with regard to its economic policies. Due to the importance of the state in the economic development of Iran, this thesis has been devoted to the economic role of the government in Iran. We have examined the determinants of government expenditure, in three parts, its effects and the importance of different channels of finance.

In the first part, we have examined the determinants of government expenditure which indicate that on the one hand, the revenue constraint has determined the level of government expenditure at the aggregate level and changes in the pattern of expenditure have been produced by an exogenous factor mainly oil revenue. On the other hand, this exogenous factor which has granted the state a political independence from its social base, has affected the pattern of distribution of government expenditure. Due to the importance of political factors, social and economic expenditures have been undermined while defence expenditure has been over-emphasised.

The effects of such a pattern of government expenditure which has been reinforced by other economic policies, have been the distortion of economic development. As the second part will show, the effects of government economic policies have been determined by the short-run nature of the determinants of government expenditure through which the government has tried to benefit the middle and upper classes in order to grasp some political support. In the main the majority of peasants have been ignored and have received no part of government expenditure. Also, by the emphasis on capital intensity, has created a maldistribution of income which has appeared as an impediment

to the growth of industrial production. In the service sector, while the long-run needs for human capital and infra-structural investment have been undermined, defence expenditure has resulted in the depletion of foreign exchange and the distortion of the pattern of development.

As the third part shows, the above pattern has been affected by the structure of the Iranian fiscal system in which a relative independence of the state has been ensured through the external channel of finance which has reduced the importance of public opinion in the allocation of government spendings. Not only has it resulted in retarding the development of the fiscal system, but, has also reinforced the gearing of the Iranian economy to the exogenous determinant which in turn has been determined by the structure of the international oil market and the commitment of the Iranian government to its allies.

Due to the existence of such dualistic determinants, the government has had to balance between internal and external factors. Because of the gradual rising of importance of oil revenue, the trade-off point has moved toward external factors which has caused an increasing trend towards military expenditure. In this way, the gap between the state and its internal social base has widened and the political system has no longer been able to reflect the long-run needs of the economy. Since economic decision making has been strongly affected by the political factors, a socio-political change may be inevitable at a time of economic crisis.

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Introduction

Economic Back Ground of Iranian Society

Iran May be one of the best case studies among the oil producing countries in which the effects of oil revenue can be examined. On the one hand, it has some of the basic characteristics of typical developing countries, on the other hand, it is endowed with enormous wealth.

Iran with around 34 Million population, has enough labour of a type for which employment may be an important objective as in other typical developing countries. Also, for some centuries, it had a large agricultural sector and was one of the exporters of agricultural products in the Middle East. These factors along with other natural and human endowments such as minerals and traditional skills as well as traditional products and exports like carpets, create the basic necessary condition for the development of the industrial sector and differentiate Iran from other oil-producing countries in the Middle East and make it more similar to a typical developing economy.

While Iran shares the basic characteristics of non-oil producing economies, it has escaped some of the structural problems of development which a typical developing country has been confronted with. For some decades, the lack of foreign exchange earnings has been one of the important constraint on the development of the industrial sector in developing countries. Oil resources and their growing importance as a source of energy during the last few decades have granted the Iranian economy a potential source of foreign exchange by which some of the economic bottlenecks could have been swept away. At the same time, such resources have increased the role of the government in the economic development of the country by granting a greater possibility of spending and manoeuvrability with regard to its economic policies. In the later stage, the pattern of economic development

has even become dependent on the government policies. Also, the oil resources have affected the political structure of Iranian society because of the importance of oil as a source of energy to the Western countries and the USA. These factors differentiate Iran from non-oil producing countries and magnify the role of the state in the process of economic development in this country.

Here, we will examine the importance of the above factors on the pattern of development in Iran. We will make an attempt to show the importance of political factors in a growing economy and how they may distort the pattern of development by undermining the economic rationality and what will be the economic and socio-political consequences of such irrationality.

Due to the importance of the role of state, this thesis will be devoted to the economic policies of the state in Iran. Although we will confine ourselves to the three main economic policies, government expenditure, credit and tax policies, we will also touch upon other government policies such as prices, imports and protection which are necessary for an understanding of the overall effects of the economic role of the state. The thesis is divided into three parts.

The first part consisting of two chapters dealing with the determinants of government expenditure. The first chapter will present a brief survey of theories of the behaviour of public expenditure and the related empirical studies as well as the method of analysis. In the second chapter, we will analyse the growth of public expenditure in Iran and the importance of economic and socio-political factors responsible for the allocation of functional government expenditures.

The second part is devoted to the effects of government expenditure on the pattern of development of different sectors. In three chapters, the effects of government expenditure along with the fiscal and credit policies

will be examined. Chapter three deals with the effects of government investment on the agricultural sector by considering the government credit system, reorganization of production and fiscal and price policies. The fourth chapter considers the structure of the manufacturing sector and the effects of government investment on the development of this sector. Both the direct government investment and the indirect government assistance to the private sector are considered. The discussion is mainly centred around the effects of government policies on the structure of output and employment, along with a consideration of changes in the capital-output ratio and investment per worker. The fifth chapter is devoted to the evaluation of government services. Depending on their effects, these services are divided into economic and social services. In the former we will discuss only the importance of public services in ports, railways and roads. The latter consists of government expenditure in education, health and defence. We consider the structure of education with regard to the needs of the industrial sector and social services for trained manpower. In this respect, the importance of the supply of education and factors hampering the full utilization of the supply are considered. In the case of health, we examine the relative importance of government disbursement for health and its distribution as well as the effects of the health sector on productivity. In the case of defence, we will restrict ourselves to just the financial and manpower implications of defence expenditure.

The third part deals with the financing of government expenditure. This part is divided into three chapters. The sixth chapter evaluates the structure of the tax system with respect to the importance of different sources of government revenue and its impact on the stimulation of industrial, agricultural and generally productive investment as well as its effects on the distribution of income. The seventh chapter analyses the

importance of deficit financing and its short-run and long-run effects on the allocation of resources and distribution of income. The eighth chapter is devoted to the development of the oil sector. This chapter is divided into two sections. The first section considers the reasons behind the growth of oil revenue in oil producing countries. In this respect, three factors are responsible for the changes in the revenue of host countries; changes in the host-oil companies relationship, change in the international oil price structure and changes in the demand and thereby exports of oil. In the second section, the effects of oil revenue on the budget and foreign exchange earnings as well as the employment creation are considered. The main object in this section is to throw light on the effects of oil revenue on changes in the structure of the economy by evaluating the impact of oil revenue on the process of decision making and policy making in government bodies. After this chapter, a conclusion will follow.

However, here, we should indicate some of the problems which have in one way or another affected the empirical investigation into the Iranian economy. These problems mainly arise from the lack of necessary data and inaccuracy of statistics in Iran.

Statistical Problems

The lack of data in developing countries is an important handicap which makes empirical analysis difficult and some cases almost impossible. The deficiency arises from two sources, first, the non-existence of some categories of statistical evidence, second, the inaccuracy of existing data. In Iran there also exists another factor which accentuates the distortion and that is the political abuse of statistics.

The lack of data is serious. From 1925 to 1960, there were only a few groups of data mainly with regard to foreign trade, custom duties, oil revenue and government expenditure and revenue as well as a price index.

Reliability of such statistics is low with the exception of the foreign trade sector. The first real attempt was made in 1956 when the government collected the first population census. During 1956-60, a number of separate samplings were made regarding the performance of the agricultural and industrial sectors. Since 1959 a comprehensive time series of national income has been published by the central bank of Iran. Also, population censuses of 1966 and 1976 as well as manpower sampling and household budgets have eased the economic analysis of the 1960-76 period. Despite the existence of such a wide range of statistics for the 1960-76 period, they do not provide detailed and accurate information on other matters. For instance, the national accounts published by the central bank provide no information on output and manufacturing by industries. The central bank publishes only the pattern of value added for the main sectors of the economy in which no distinction has been made between the public and private value added in the agricultural and industrial sectors and some of the services. While some of the above information can be gathered from other sources like the Ministry of Economy and the Plan and Budget Organization, their data is not comparable to that of the central bank. The information from the Ministry of Economy on the pattern of manufacturing is still far from sufficient. The data provided by the ministry hardly covers the main areas of manufacturing activities. In particular, it lacks data on manufacturing by size of establishment and legal status.

More importantly, the data available suffers from low accuracy. While the central bank publishes the national accounts, it has based its data on information gathered within that agency or received from other government responsible bodies. It receives data on the growth rate of agricultural production from the Ministry of Agriculture which most observers of the Iranian economy believe to be well over stated by the ministry. With regard

to the growth rate of value added, the central bank has mainly relied on its regular survey of selected large establishments. Therefore, the growth rate of the whole manufacturing sector depends on the growth of production in the large establishments in a country where rural and urban-small industries play an important role in production. Therefore, this estimation may not be truly representative of the growth of manufacturing value added. Apart from the above short-coming, the central bank revises its estimation frequently which makes the time series incomparable in some cases, particularly when the revised data covers a few successive years. Still, the central bank's estimation is more reliable than other sources. In particular, the data on the manufacturing sector provided by the Ministry of Economy suffers from low reliability. For instance, data for rural production is only a guess-estimate without any regular sampling and has been substantially revised in some cases, which reduces the reliability of the time series. Also, the data on urban-small industries which is based on regular sampling of 5 percent in a few large cities suffers from some degree of inaccuracy because of the fragmentation of the Iranian market. The most reliable data in manufacturing sector is related to the large establishments for which data is annually collected from all the large establishments. Therefore, the mistake may arise only from wrong information provided by the factories. However, the main problem with regard to the Ministry of Economy is the presentation of its data. In a number of cases, we have found the data inconsistent. For instance, the output for large scale industries in a few cases is greater than the total for the country as a whole or value added is greater than the gross output. Also figures related to particular items which may appear several times in the same publication may be different from one page to another. These short-comings would reduce the reliability of statistics provided by the Ministry of Economy.

Apart from the above statistical problems, there are still some others which cannot be considered as technical problems but are largely affected by political factors. Despite the existence of data on the distribution of income, the central bank has not published such data and has even refused to let the data be used by the ILO mission working on behalf of the Iranian government in 1973. Another example is the coverage of defence expenditure under other items in budgetary allocation and foreign trade statistics, although these groups are the most reliable statistics in Iran.

The above indicates the major problems of Iranian statistics and the low degree of reliability in a number of cases. However, these are problems which can be observed but there may still be other short-comings, such as made-up data for political gains and so on, that cannot be singled out. At least, with regard to the price index, one may say that during 1973-76 the actual inflationary pressure in the market was higher than that which has been illustrated by the whole and retail price indexes of the central bank. The published price indices were mainly affected by the direct control of prices by the government while the actual range of such prices were enormous and common.

Therefore, one has to consider the restriction, which the lack of data and the low reliability of statistics have imposed on us in the analysis of the performance of the Iranian economy.

Part One

Determinants of Government Expenditure

Introduction

In this part, the main concern is the investigation of the determinants of government expenditure and the reasons behind the growth of public expenditure in Iran. We will consider the pattern of government expenditure with regard to its functional uses and economic categories. In this respect, the effects of socio-political factors and economic determinants on the allocation of public expenditure to different functional and economic categories will be discussed.

The part is divided into two chapters. In the first chapter, we will critically analyse the theoretical explanation of the behaviour of government expenditure. Also, we will explain our method of analysis and the statistical problems which we will be confronted in the analysis of government expenditure in Iran. The second chapter deals with the empirical evidence in the case of Iran. In two sections we will evaluate the pattern of government expenditure for two different periods, 1928-58 and 1959-76.

Chapter One

1-1 Theoretical Explanation

In the evaluation of public expenditure, two different approaches have been used, the "normative" and "positive". The former concerns itself with what 'should' constitute government activity and, hence, with where the limits to government engagement in providing goods and services ought to lie. In the latter, conclusions about determinants and theoretical behaviour of government expenditures are derived from a priori hypotheses and empirical investigations. Here, our analysis is based on the positive approach which will briefly be discussed.

At the turn of the century, Adolph Wagner tried to generalize the reasons for the growth of public expenditure along with the development of the industrial state. However, it was not until the mid 1950's that economists paid attention to the growth of public expenditure and its behaviour. Since the mid 1950's, several studies have been carried out in which different economic and socio-political factors have been introduced in order to explain the pattern of public expenditure, particularly, after World War II. Generally, these theoretical explanations and empirical investigations can be divided into six groups: First those which relate the growth of public expenditure to the stage of economic development; second those which advocate revenue constraint and displacement effects such as wars; third those which relate the change to the ideological difference or economic system; fourth political factors, fifth productivity lag and six the degree of openness. Here, we will consider the first two groups in detail and cover the rest very briefly.

1-1-1 Stage of Development

Adolph Wagner was one of the pioneers in the evaluation of public

expenditure who attributed the growth of state expenditure to the rising of income. Wagner formulated his argument in a "law of expanding state expenditure". He, in essence, argued that as a nation experiences economic development and growth, the growing importance of government activity and expenditure will be an inevitable feature of a "progressive state" and the state expenditures tend to rise faster than national output¹. To explain the reasons for the rising of government expenditure, Wagner distinguished three types of state activity and tried to prove that government expenditure will rise faster than national output for each of them².

Firstly, an expansion would come about with respect to the administrative and protective functions of the state. Wagner suggested that the need for increased participation by the state originates in the "inevitable" centralization of administration and in the "atomization" of social and economic life that results from economic development. Also, he anticipated that the increase in population density and urbanization would be additional factors leading to an increase in public expenditures on law and order and on economic organizations in order to maintain the efficient performance of the economy in the face of the increased friction of urban life.

Secondly, Wagner predicted a considerable relative expansion of "cultural and welfare" expenditures, especially when the social benefits of the services are not susceptible to economic evaluation (education in particular).

Thirdly, Wagner suggested that the inevitable changes in technology and the increasing scale of investment required in many activities would make the public corporation the only alternative to the joint stock company. In his view, the private enterprises and monopolies mismanage and waste capital during business cycles, and therefore, the state in the interests of economic efficiency would take over the monopolies. This type of govern-

ment expenditure plays the most important role in the explanation of the rising of public expenditure in Wagner's law, as Musgrave specifically says "indeed much of Wagner's emphasis is on the 'expansion of public enterprises'"³.

However, Wagner's view as a "law" suffers from two structural defects as some economists have pointed out⁴. First, although Wagner adduces reasons why government expenditures will increase in any developing state, and some of these reasons are technical in character which operate whatever view is taken of the role of the state, there is no priori reason to believe that government expenditure will continue to rise faster than national output over time and in any stage of development. It is true that demand for some of the government expenditure in absolute terms such as general affairs may rise rapidly at the beginning of industrialization and the domination of the capitalist state, and the demand for some others like social services may grow faster when a certain stage of economic development is reached. But it does not suggest that the growth of public expenditure will be higher than the output. However, it is not the lack of empirical support which weakens the Wagner law, but it is the lack of theoretical explanation for the generalization of Wagner's fiscal law which may invalidate the existence of the law. It seems that the law of increasing government expenditures is a corollary of the political philosophy and interpretation of history that Wagner accepted. Therefore, the existence of the law depends upon the validity of the organic theory of the state upon which he relies. If the state does not behave as Wagner predicted, therefore, there will be no fiscal law to explain its behaviour with regard to the expenditures.

Second, market failures have not resulted in the change of structure of the market with regard to the share of public and private economies predicted by Wagner. Although greater attention has been paid to the role

of fiscal policy in the maintenance of stability in matured economies, this has not been the case for most of the developing nations in which the economic growth consideration has occupied the first priority. Not only can the state behaviour not be generalized in this respect, but more importantly, the fiscal role of the state with regard to stabilization policy has been entirely different from that of Wagner's prediction. In modern economics, stabilization policies try to affect the aggregate demand through changes in government spendings for social services and investment rather than taking over the private enterprises due to the efficiency consideration as Wagner predicted. Similarly, the role of the state in the developing countries is to ensure the development of the private enterprises.

However, Wagner's failure to produce an acceptable fiscal law of government behaviour arises from its concept of "organic state", by which he reduces the role of the state in the complex process of economic development to its own belief of state behaviour. He ignores the importance of historical changes and the vital role of socio-political factors in determining the economic role of the state in different stages of development. In the absence of a fiscal law, one should expect to see different government behaviour in different stages of economic development and with different socio-political structures.

With the historical changes during the twentieth century such as World War I, the growing of economic crises and social pressures, World War II and the rising of international ideological differences have changed the economic role of capitalist state in both developed and under-developed countries. This is the changing of the economic role of the state which has called for a vigorous study of the fiscal behaviour of the state, particularly since 1950's. Students of the demand-oriented approach may be divided into two groups: First, those who have conducted their studies to test the validity

of Wagner's law⁵; secondly those who have looked for a relationship between the rising of per capita income, as an index for stage of economic development, and the rising of total, functional and economic expenditure of the state with different reasons from those stated by Wagner⁶.

Those who have tried to test the validity of Wagner's law have been confronted with considerable confusion surrounding the interpretation of Wagner's law which Michas⁷ has attributed to Wagner's own inexplicit formulation of his hypothesis and the inconsistency of the various English translations of Wagner's work. While there is no explicit statement in Wagner that the law of expanding scale relates to the share rather than the absolute level of public expenditures, occasional reference to "quotas" suggests the former. Another problem which is not clear is whether the law is applicable to a specific period of economic development or is valid over time.

In an extreme case, Wagner's hypothesis can be interpreted as the continuous rising of the government share until it accounts for 100 percent of national output. However, Herber suggests that Wagner's hypothesis applies only to industrializing nations⁸. Further, Bird argued that "...the law was explicitly framed to refer only to states in which income was rising as a result of industrialization. The condition under which one might expect the law to operate would therefore seem to be (1) rising of per capita income, (2) technological and institutional change of a particular sort, and (3), at least implicitly, democratization (in the sense of wider political participation) of the polity."⁹ Also, Pryor believes that the law is applicable to nations which are in the process of transforming their economies from rural-agricultural to urban-industrial.¹⁰ Herber goes even further and suggests that Wagner postulates a slower growth in the relative share of government in both pre-industrial and post-industrial stages of economic growth. But, according to Crowley, Herber does not rigorously support his

position¹¹. The above interpretations show that the application of the law is far more limited than it propounds, and the law should have no implication for either developed countries or under-developed nations. It may only cover the middle-range income group and given particular conditions.

Further more, the confusion surrounding the interpretation of Wagner's law has affected the formulation of the law with regard to the choice of Index (see note (1) for different definitions of the law). Some researchers have interpreted Wagner's law as the elasticity of public expenditure (E) with respect to gross national product (GNP) and above unity ($E=f(\text{GNP})$, $^eE.\text{GNP}$)¹². Another writer relates the law to public consumption expenditure rather than total government expenditure which means the elasticity of public consumption (C) relative to national income (Y) is greater than unity ($C=f(Y)$, $^eC.Y$)¹³. According to another version, the elasticity of public expenditure (E) with respect to gross national product per capita (GNP/P) is greater than unity ($E=f(\text{GNP}/P)$, $^eE.\text{GNP}/P$)¹⁴. Musgrave has interpreted the law as the elasticity of public expenditure as a share of gross national product (E/GNP) with respect to gross national product per capita (GNP/P) and the elasticity is greater than unity ($E/\text{GNP}=f(\text{GNP}/P)$, $^eE/\text{GNP}.\text{GNP}/P$)¹⁵. Still, another researcher looks at the elasticity of public expenditure per capita (E/P) with respect to gross national product per capita (GNP/P) as the appropriate indicator¹⁶.

The above differences in the formulation of Wagner's law coupled with different sets of data used by researchers have reached completely different results ranging from supporting the law to the total rejection of any relationship between the rising of income and the rising of public expenditures. However, as one writer has pointed out, some of studies are based on the international cross-section data by which the validity of Wagner's law cannot be tested¹⁷, because the cross-section is related to a

point in time while the law is applicable to the rising of government expenditure along with the rising of income over time and in one country only. Another factor which causes misunderstanding of the results is that data are used for developed and under-developed countries which do not fit the conditions under which the law operates (see above P13). When this distortion and misinterpretation are considered, on balance, the evidence appears more to support than to controvert Wagner's law¹⁸. Although some evidence shows that wagner's law holds in aggregate terms and for social services, the result is inconsistent with Wagner's original ideas in the sense that neither the "market failure" nor the expenditure on administration have appeared as important factors in explaining the rising of government expenditure over time. These empirical studies may suggest that Wagner's law has no important implications for explaining the pattern of government expenditure during the twentieth Century due to the different historical setting which the law belongs to.

The second group of researchers have tried to explain the pattern of government expenditure in the present time. By comparing these patterns in developed and developing countries, they have made an attempt to reach general causes behind the behaviour of state expenditures during economic development. Also, in order to relate the causes to economic factors, they have distinguished between economic and socio-political factors affecting the pattern of government expenditure. Having chosen the per capita income as an index for economic development, they have reached different results depending on the data and the statistical methods they have used. Some of the researchers hold to the validity of a significant relationship between per capita income as an index for economic development and the share of government expenditure in national income. Some others reject the existence of such a relationship.

Among the first group there is considerable agreement on some points and differences on others, and the following have had respectable statistical support:

- 1- The share of total government expenditure in the gross national product of developed and developing countries increases with per capita income.
- 2- Current expenditures as a whole increase their share of the national product with rising income.
- 3- Social expenditures increase as a percentage of total government expenditure with rising incomes.

However, the reasons offered to explain the above pattern of expenditures are different from one writer to another. Martin and Lawis, in their cross-section have found that the difference between developed and under-developed countries is in the amounts spent on defence, on the public debt, on social insurance schemes and on food or agricultural subsidies while the differences in the basic expenditure are very insignificant. They argue that "the main reason why (developed countries) now spend relatively more on their public services than they did a hundred years ago is not that they are richer, but that they have a different concept of the duties of the state....But this change in ideas is not confined to the richer countries, and is not proportional to income per head. It has affected the poor countries just as much,...."¹⁹ They, also, speculate on the relatively slow growth of productivity in the public sector as a secondary reason for the expansion of this sector. But, some how, their reasons are inconclusive²⁰.

Willimson suggests a combination of economic and socio-political factors which each or a combination of them cause the share of public expenditure in the national income to rise in different stages of development. These are a number of factors including the importance of capital expenditure in electrification, power, transportation and urban housing in the

early stage of development, the slow growth of productivity and the rising of wages in the public sector, the need for social security, unemployment insurance, a complex composition political machine and formal community protection in urbanizing society to replace the family and village functions and finally social and political progressiveness²¹.

From Thorn's point of view, the main reason for the rising of public expenditure arises from the importance of social services. He argues that "as development proceeds there is usually a steady social transformation, and growth in the relative size of the urban population accompanied by an increase in the relative political importance of urban industrial workers in the population.... The growing political strength of the urban workers is often accompanied by the development of more democratic institutions as development undermines the base of power of the ruling oligarchies, derived from the ownership of the land so that the urban populations can influence the composition of the government which further accelerates the growth of public social expenditures favoring the urban population.... Even under a dictatorship this process may operate since few dictatorships can rule by personal influence alone but require the support of large, organized groups in the society. The urban population receives a voice, if not a vote, and the tendency for social benefits for urban groups to grow continues."²² With respect to government expenditure on administrative and economic services in the process of economic development his argument is inconclusive, "There are opposing tendencies at work," he says²³. On the one hand the complexity of the society calls for higher government expenditure on these services, on the other hand, the rising of labour productivity in the public sector may act as an offset to the forces tending to increase government expenditures.

These few examples may show the great differences among the researchers

about the causes of the rising share of public expenditure in the national income. But one thing is clear, although most of the above mentioned factors may call for higher government expenditure in process of economic development, they do not suggest that the rise should inevitably be higher than the growth of national income. In other words, there is no reason for the income elasticity of demand for public expenditure as a whole to be higher than unity and remain greater over time. While the lack of theoretical explanation on the demand side may leave the question open, one may wonder whether the empirical studies supporting the existence of a significant relationship between the per capita income and the share of government expenditure in the national income are accidental and fallacious ones. The above works share the general weakness of studies in this area which have attempted to explain government expenditure by using cross-section analysis. Such an analysis is limited as it only indicates why government expenditure differs between countries at a particular point in time. Hence, conclusions derived from such studies are related to explaining differences in the share of government expenditures in the various countries examined, rather than strictly concerned with the factors that may determine such shares.

Moreover, the importance of per capita income revealed by the cross-section analysis may be a reflection of extreme level of income in some of the countries examined. This may be so because when the countries are divided into high income and low income sub-groups, the association between the share of government expenditure in the national income and per capita income disappears. In neither case does the evidence support conclusively the proposition that the income-elasticity of government expenditure is positive and more than one. For example, confining the country sample to highly advanced countries alone, revealed that government expenditure in those countries does not seem to be significantly associated with per capita

income.²⁴ Also, a recent study shows that the share of public expenditure in national income (in real term) in some of matured economies has declined and the elasticity for government expenditure has fallen below one during 1950-70²⁵.

Also, some studies which are totally concerned with developing countries indicate that there is no significant relationship between per capita income and the share of government expenditure in the national income.²⁶ While neither theoretical explanation nor empirical evidence show a conclusive and significant relationship between per capita income and the demand for government expenditure, one may conclude, (as did Lall)²⁷, that if the level of development does have an effect on the pattern and size of government expenditure, per capita income may be the wrong index of development. Or if per capita income is the right index, then the level of economic development has no special effect on the pattern of government expenditure. or its effects are overlaid by the influence of other factors. We cannot simplify the process of economic development to the rising of income when we deal with structural changes in the economy. What appears to be the problem is the attempt to reach a sort of general theory of fiscal behaviour of the state while the socio-political structure of any country makes the pattern of government expenditure unique to the particular case study.

1-1-2 Revenue Constraint

While the demand-oriented hypotheses have not succeeded in explaining the complete pattern of government expenditures, some reseachers have concentrated on the supply of revenue in relation to the behaviour of government expenditure in the process of economic development. Such hypotheses suggest that government expenditure is restrained by the government's ability to raise revenue. It is true that government revenue may not be fixed at an absolute level which means no change either in the tax base

or tax rate. But revenue may be fixed relative to a given level of income. This means that although the revenue increases either due to the rising of income or changes in the tax structure, it will be rigid for various reasons. Firstly, it may be administratively impossible to bring about a significant increase in revenue. Secondly, revenue may be fixed for economic reasons. The limit may be imposed by fears of disincentive effects as a consequence of rising of revenue, low degree of monetization and a subsistence sector in developing countries. Thirdly, the limit may be imposed by socio-political factors which is true for both developed and under-developed countries, although of a different nature. While in the former the revenue constraint may operate when a certain level of taxation is recognized as "intolerable", in the latter the political structure of the country may make the imposition of taxes on certain classes of the society impossible and also affect the structure of the fiscal system (see chapter 6 for detail argument' about Iran).

It may be argued that the government can obtain more funds by borrowing, and hence the above argument relating primarily to tax revenue are irrelevant. However, even government ability to borrow is not unlimited. Such an ability is determined by a complex economic, institutional and political factors. For instance, the backwardness of the money market, foreign exchange considerations and fears of inflation may show the importance of economic factors (see chapters 6 and 7). These factors render continuous borrowing by the government difficult.

Furthermore, the seriousness of the revenue constraint varies according to whether the short or long run is considered. One implication made concerning the revenue constraint is that it is in the short run that government expenditures are restrained by revenue. In the long run the problem will be overcome by the structural changes in the fiscal system

in the process of economic development. However, this does not mean that in the higher stages of development the revenue constraint is irrelevant in the consideration of the government expenditures. But this implies that the nature of revenue constraint which may operate in an advanced economy is different from that of a developing nation. In the sense that the determinants of revenue constraints in developed economies are less affected by economic factors and, therefore, the revenue constraints in such countries are not as rigid as in developing countries. In this respect other factors are also operating. In advanced economies, government expenditure influences and facilitates the government revenue. This is so, because in such countries revenue (and in particular tax revenue) is flexible in relation to income and, hence, the built-in increase in revenue accommodates the increase in expenditure, without the need to impose higher tax rates. Also, the effects of revenue constraints are less serious, because the existence of the highly articulated money markets facilitate and raise the possibility of government borrowing to meet its expenditure obligations, particularly in the short run.

The existence of such revenue constraints are recognized by researchers both for developed and under-developed countries. In the case of developing nations, Lotz²⁸ refers to the importance of the revenue constraints and their effects on the government expenditures. Also, Oshima²⁹ in his time-series study of government expenditures in developed and developing countries has found that there is a considerable difference between the pattern of government expenditures in developed and under-developed countries after World War II. While government expenditures in the former group rose rapidly after the war, public expenditure did not show any significant change in the latter group. Since there is no reason to believe that the possibility of expansion of the public sector in developing countries is

lower, Oshima sees the differences in the revenue side in the sense that revenue remains as a constraint on the government expenditures in developing countries. Although the differences can be attributed to the different nature of the revenue constraint in developed and developing countries rather than the non-existence of the constraint in the former groups, the question is why developed countries have been able to expand their expenditures rapidly after the war. It is this question which brought Peacock and Wiseman³⁰ to introduce a new concept in this area of public finance that is "displacement effects".

Displacement Effects

At the turn of the Century, Wagner recognized the importance of revenue constraints, but, based on his "organic state" concept and progressive state, he felt that "in the long run the desire for development of a progressive people will always overcome these financial difficulties."³¹ In a critique of Wagner, Peacock and Wiseman argued that the possible expansion of expenditures is essentially limited by revenue and that rates are fixed by political and social forces which tend to remain unaltered unless the system receives an external shock such as war. They have taken the U.K. as a case study and have tried to show the pattern of expenditure and the state behaviour in relation to the major wars.

For this purpose they have introduced the concept of "displacement effect" by which they explain the divergence of government expenditure from its normal trend, that is when the idea of "tolerable burdens" of taxation cannot explain the more rapid rates of expenditure. "There may thus be a persistent divergence between ideas about desirable public spending and about the limits of taxation. This divergence may be narrowed by large scale social disturbances, such as major wars. Such disturbances may create a displacement effect, shifting public revenues and expenditures to new

levels."³² So the displacement effect explains or bridges the gap between the "tolerable burden" of taxation and the "desirable level" of public expenditure. This "displacement effect" has two aspects. On one hand, it makes the former "intolerable burdens" and acceptable one and on the other hand creates a new and continuing obligation for the government.

This sort of tax constraint in a developed economy can be attributed to the creation of the "desirable level" of expenditure. Thus, the social upheavals, actually, create the condition for raising income through the creation of new acceptable spendings. This point can be clearly observed from Gupt's explanation in the case of the Great Depression. "It seems highly likely that the "shift" associated with the Great Depression occurred because of the change in the attitude towards public expenditure. Many "new" expenditures which were not considered very "desirable" became highly "desirable", and this increased the "existing gap" between the "desirable level" of public expenditure and the "tolerable burden" of taxation during the Depression. An increase in this gap seems to have permitted the acceptance of new taxes and the consequent increase in the "tolerable burden", and thus, a decrease in this "gap"³³. From the above explanation, it can be deduced that the sequence of decision in a developed economy runs from expenditure to revenue. That is, the tax policy tends to accept the level of expenditure as its revenue goal.

The displacement effects as explained by Peacock and Wiseman rest on their observation of the U.K. which shows that under periods of social upheaval people tend to revise their previous feelings towards tax levels. Although this implies a revenue constraint, this is a type of constraint on the electorate and legislature which presupposes a modern democratic system that is different from that of a developing country. Goffman has rightly pointed out this point. "In many developing nations, internal dictatorship

or external pressure from a foreign power or even an international agency may reduce the role of the ballot box and introduce a different set of constraints."³⁴ However, while in a developed economy changes in the feelings of people may be enough to put the ballot box at work, in a developing country a fundamental changes in the socio-political structure of the society are needed to provide the necessary conditions. Changes in the internal socio-political structure may ease the revenue constraint when an economy is in the transitional stage from feudalism to capitalism. The socio-political changes would bring about the necessary condition for the raising of revenue by narrowing the gap between the "desirable level" of expenditure, which is determined by the growing importance of capitalist classes, and the "tolerable burden" of taxation. Although we cannot compare the effects of major wars as displacement effects on the pattern of public expenditure in developed and developing countries because the latter did not fight in the wars, a study shows that the internal socio-political changes produce important displacement effects. Reddy has found that, in case of India, "the displacement effect produced under the impact of the world wars disappeared immediately after the war while the displacement effect produced after Independence (particularly after 1951) is still in force."³⁵

However, it is not only the difference in the socio-political structure of advanced and under-developed economies which may affect the nature and rigidity of the revenue constraints, but also, and more importantly, it is the differences in the economic structure of these economies which make the nature of the revenue constraint in developing countries distinct from the advance economies. While, as has been explained above, the tax policy in developed countries tends to accept the level of expenditure as its revenue goal, in developing countries the level of expenditure is restrained by the revenue constraint. The revenue constraint in developing countries

rests on the structural problem of under-development, mainly low productivity, lack of an efficient fiscal system, and external pressures particularly the foreign exchange earning. Therefore, to overcome this "revenue constraint", a type of upheaval is required which can, at least, reduce the impact of disturbing factors. Goffman and Mahar found different causes for displacement effects for the six countries in their study, for example the revolutionary program for Costa Rica, and the changes in foreign trade condition for Haiti³⁶. Comparing the differences in the nature of revenue constraint and displacement effects in developed and under-developed economies, one may conclude that depending on the economic and socio-political structure, an economy may experience different displacement effects in the process of economic development which may ease the revenue constraint in a period of time. The seriousness and rigidity of the revenue constraint will be alleviated along with the development of the fiscal system, changes in the structure of the economy and the rising of per capita income.

1-1-3 The Degree of Openness and other Determinants

Some researchers in order to consider the importance of revenue constraint along with the normal pattern of government expenditure in the process of economic development have chosen the "degree of openness" as the appropriate indicator for the level of economic development. In this way, they have tried to relate the behaviour of government expenditure to the revenue constraint as well as the rising of income per capita. The idea of the degree of "openness" as an explanatory factor rests on the differences observed in the pattern of public expenditure among developing countries. Hinrichs and Bird³⁷ show that per capita income is an irrelevant explanatory factor in the context of poor countries, and hence, they argue that the behaviour of public expenditure in such countries can be explained by the

import ratio (total imports/GNP). The import ratio is an index for the degree of openness in these countries. The rationale for the importance of the foreign trade sector seems to be a two-fold one. Revenue depends on the availability of tax handles and the foreign trade sector provides such a handle. This is because taxing such a sector is administratively easy and politically feasible. On the other hand, the foreign trade sector indirectly provides spill-over effects in the economy by speeding-up the monetization of the economy and, hence, raises the taxable capacity (for detail argument see chapter 6). However, the validity of the degree of openness as an appropriate explanatory factor is objectionable on two grounds. First, it is true that the foreign trade sector can easily be taxed, but, the expansion of foreign trade depends seriously on the availability of foreign exchange, lack of which is the well-known problem of developing countries. Secondly, by gradual development towards industrialization, the ratio of taxable imports will decline due to the rising need for intermediate and capital goods (see chapter 6). Nevertheless, in the very early stage of development when the structure of the economy is transforming from a feudalistic structure to a capitalist one, taxing of the foreign trade sector efficiently may provide the government an important source of revenue which may shape its pattern of expenditure.

Other factors which have been introduced to explain the pattern of government expenditure in different countries are the ideological differences, political factors and the productivity lag. As far as the first factor is concerned, the differences spell themselves out in the different concept of the role of the state. These differences may not clarify the pattern of expenditure in the particular economic system that is the role of capitalist state in the economic development. Although one study has tried to make a comparison between different economic systems, capitalist and communist, the

differences in the pattern of public consumption expenditure explain only part of the total government expenditure in these countries³⁸. Also, the different concept of the role of the state may make the similarities and differences in statistical terms meaningless.

The second factor is far more important in explaining the differences in the pattern of government expenditure among capitalist countries. The gradual change in the socio-political structure under the growing social pressure and changes in the power balance of political groups will raise the need for social reform and reduce the political resistance to the allocation of resources for the provision of public goods³⁹. In the evaluation of the pattern of government expenditure, one cannot distinguish between the economic and political determinant because they are the two sides of a coin. The interrelations among these factors have reduced the importance of economic indicators such as per capita income and the degree of openness.

We have already mentioned the third factor that is the productivity lag⁴⁰. Essentially, it has been argued that the productivity lag seemed to be reflected in the behaviour of the share of the labour force employed by the government. The rise in wages in the less productive sector (government) will bring about an increase in civil expenditure can be accounted for by wages and salaries. But as we mentioned earlier there is no conclusive evidence to show such differences. In developing countries, governments use more capital than other sectors of the economy and therefore one may expect productivity to rise along with the more efficient use of capital.

The above mentioned factors will give us the necessary theoretical explanation to evaluate the pattern of government expenditure during the economic development of Iran. Here, we will sum up the above theoretical hypotheses and explain the method of evaluation which will be used.

1-2 Method of Evaluation

In the above section, most of the hypotheses which may explain the pattern of government expenditure in the process of economic development have briefly been discussed. These hypotheses, depending on their nature, can be divided into two groups, those which produce permanent effects and those factors which may cause diversions from the normal pattern⁴¹.

Permanent Effects

Those factors which produce permanent effects on the pattern of government expenditure are mainly the rising of demand for public goods along with the rising of income, the growth of population and the changes in the relative share of urban population as well as changes in the population-pyramid. The population factor which also reflects the socio-political changes may be the most important determinant of public expenditure with regard to the permanent effects. Another factor which may also affect the pattern of public expenditure is the inflationary pressure. If the rate of inflation for the GNP as a whole and public expenditure are different under the period of the study, it may distort the pattern of expenditure ratio.

Firstly, we examine the existence of a relationship between the rising of income and the rising of public expenditure. The question will be whether the rising of income can explain the total or partial behaviour of the expenditure or whether the result is an accidental one without any important economic meaning, and if a relationship between the rising of per capita income and government expenditure with a significant statistical coefficient exists. Here, since we deal with the pattern of public expenditure over time and in one country only, the detailed information about the nature of economic and socio-political factors would allow us to clarify the existence or non-existence of such a relationship between income and government expenditure and its real influence on the pattern of public expen-

diture. In this way, we would not rely on the significance of statistical results, but largely on the causes of such patterns. However, in order to take into account the above consideration, one problem will be the choice of an appropriate measurement for testing the relationship between the rising of income and the rising of public expenditure. As we have explained earlier, a numbers of functions have been used to test the above relationship some of which seem not to be appropriate. Here, following Michas⁴² and some others, one may assume that if the share of public expenditure in the GNP rises along with the rising of per capita income, "ratio-income-elasticity" of demand for public expenditure should be positive. Thus:

(1) $E_1/\text{GNP} = f(\text{GNP}/P)$ E is government expenditure and P is population

(2) $\text{Log } E_1/\text{GNP} = a + b \text{ Log}(\text{GNP}/P)$

Where (b) in equation (2) is a measure of constant elasticity. Also, alternatively, the relationship between per head government expenditure and per capita income can be used which is monotonically related to equations (1) and (2).

(3) $E_1/P = f(\text{GNP}/P)$

(4) $\text{Log } E_1/P = a_1 + b_1 \text{ Log}(\text{GNP}/P)$

Where (b₁) is a measure of constant income-elasticity which should be positive and greater than one.

Secondly, we will evaluate the effects of population growth on the pattern of public expenditure ratio at constant with that of the current prices. The differences or similarities would show the extent to which the demand for or the supply of public expenditure is affected by the different rate of inflation for publicly provided goods and those of the society as a whole. Here, we will use a deflatory index of GNP, public current and capital expenditures.

Factors Causing Diversion

We will examine the importance of the revenue constraint in Iran by

relating the pattern of government expenditure to the pattern and different components of government revenue. In this respect, we will evaluate the importance of those factors which may have eased the existing revenue constraint and may have produced diversions in the normal pattern of government expenditures due to both the socio-political upheavals and economic factors whether exogenous or indigenous. In other words, we will examine the nature of displacement effects in Iran.

Following the above consideration, if a revenue constraint exists, the allocation of the government expenditure to current and capital services and its functional duties will be affected by such a constraint. Therefore, we will also examine how the nature of revenue constraint and the socio-political factors would affect the trade-off between different government services.

In the following chapter, the pattern of public expenditure for the period of 1928-76 will be evaluated according to the above two main hypotheses. However, before starting the examination of government expenditure, one should realize the limitation imposed by the inadequate data which does not allow a complete investigation of the changes in the pattern over time. The available data allows us to trace the trend of public expenditure in Iran during two periods. The first period starts in 1928 and ends in 1948. The second period is 1959-76 for which the GNP estimation is available. The national income accounts would make it possible to explain the impact of government expenditure on economic development, so we have to concentrate our study on this period. The scattered data for 1950's would help to fill the gap between these two periods and trace the trend of the government expenditure.

The data for the first period shows only the functional allocation of government expenditure and no specified data for current and capital

expenditure is available. Also, a different price index for government expenditures does not exist, therefore, we will use the general index of wholesale prices for deflating government expenditure.

However, in tracing government expenditure in the second period we are initially confronted with two statistical problems. In the first place, prior to 1964, the following items were excluded from the government budget, a) the revenue collected under the heading of special budget and the expenditure out of this budget, and b) the revenue and expenditure of the commercial agencies affiliated to the government. Although we will try to give a complete view of government expenditure, we have to concentrate on data available from 1964 onwards. Secondly, the 1960's started with a recession. This may distort the overall view of the government expenditure, so we have to be cautious about the 1960-63 period in this study.

Due to the lack of comparative data for public expenditure as a whole we have to examine the growth of public expenditure in two different classifications. First, we will examine the growth of government expenditure which covers only the current and development expenditures, that is, the special budget, the expenditure of commercial government agencies and debt repayments are excluded. This would limit our study to an examination of capital and current expenditures. Secondly, the available data for 1964 onwards would allow us to examine government expenditure by its functional duties which are more or less comparable to that of the 1928-48 period's classification.

Note

- 1- Wagner, Adolf., Three Extracts on Public Finance, in Musgrave, R.A., and Peacock, A. T., Classic in the Theory of Public Finance, London, 1959, P. 8.
There are number of definitions or interpretations of what Wagner meant in fiscal law:
 - a) "Government expenditure must increase at even faster rate than output." Peacock, A.T. and Wiseman, J. The Growth of Public Expenditure in the United Kingdom, London, 1967, P. 17.
 - b) "Wagner... asserted that in growing economies the share of public consumption expenditure in the national increases." Pryor, F.L. Public Expenditure in Communist and Capitalist Nations, London 1968, P. 451.
 - c) "...as a nation experiences economic development and growth, an increase must occur in the activities of the public sector and that the ratio of increase, when converted into expenditure terms, would exceed the rate of increase in output per capita. In other words, the ratio of public expenditure to GNP(...), both aggregatively and by function, would rise as GNP rose." Goffman, I.J., On the Empirical Testing of "Wagner's Law": A Technical Note, Public Finance, Vol. XXIII, 3/1968, P. 359.
 - d) Musgrave, has interpreted the Wagner's law "... as postulating a rising share of public sector... or ratio of public expenditure to GNP...(in the context). of the development of a country from low to high per capita income...." Musgrave, R.A., Fiscal System, New Haven 1969, P. 74 .
- 2- For the type of state activity and the reasons see Wagner, A. Op.cit.; Musgrave, R.A., Op.cit., PP. 73-74; Bird, R.M., Wagner's "law" of Expending State Activity, Public Finance, Vol. 26, 1971, PP. 1-3; Peacock and Wiseman, Op.cit., PP 16-20.
- 3- Musgrave, R.A., Op.cit., P. 73, n.
- 4- See references in Note 2.
- 5- See references in Note 2; Gandhi, V.P., Wagner's law of Public Expenditure: Do Recent Cross-Section Studies Confirm It? Public Finance, Vol. 26, 1971.
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- 8- Herber, B.P., Modern Public Finance, Homewood, 1975, P. 77.
- 9- Bird, R.M., Op.cit., P. 3.
- 10- Pryor, F.L., Op.cit. P. 52.
- 11- Crowley, R.W., Long Swings in the Role of Government: An Analysis of Wars and Government Expenditure In Western Europe Since the Eleventh Century, Public Finance, Vol. 26, 1971, P. 29.
- 12- See Note 1, Peacock and Wiseman, Op.cit.
- 13- See Note 1, Pryor, F.L., Op.cit.
- 14- See Note 1, Goffman, I.J., Op.cit.

- 15- See Note 1, Musgrave, R.A., Op.cit.
- 16- Gupta, S .P, Op.cit.
- 17- Bird, R.M., Op.cit.
- 18- Ibid.
- 19- Martine and Lewis, Op.cit., P. 206.
- 20- Ibid.
- 21- Williamson, J.G., Op.cit., PP. 45-47.
- 22- Thorn, R.S., Op.cit., PP. 24-25.
- 23- Ibid., PP. 25-26.
- 24- Hinrichs, H.H., Determinants of Government Revenue Shares, The Economic Journal, 1965 P. 456., n.; Thorn, R.S., Op.cit., P. 41.; Musgrave, R.A., Op.cit., P. 123.
- 25- Beck, Morris., The Expanding Public Sector: Some Contrary Evidence, National Tax Journal, Vol. XXIX, No.1, 1976.
- 26- Lall, S. Op.cit.; Lotz, R.J. has found that the per capita income is not an adequate measure in the case of developing countries, Op.cit., P. 119.
- 27- Lall, S. Op.cit., P. 169.
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- 29- Oshima, Harry T., Share of Government In Gross National Product For Various Countries, American Economic Review, Vol. 47, 1957, P. 386.
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- 31- Wagner, A., Op.cit., P.8.
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- 40- Williamson, J.G., Op.cit.; Thorn, R.S., Op.cit.
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- 42- Michas, N.A., Op.cit., PP 80-82.

Chapter Two

2 Pattern of Government Expenditure
in Iran2-1 Pattern of Government Expenditure
During 1928-58Permanent Effects

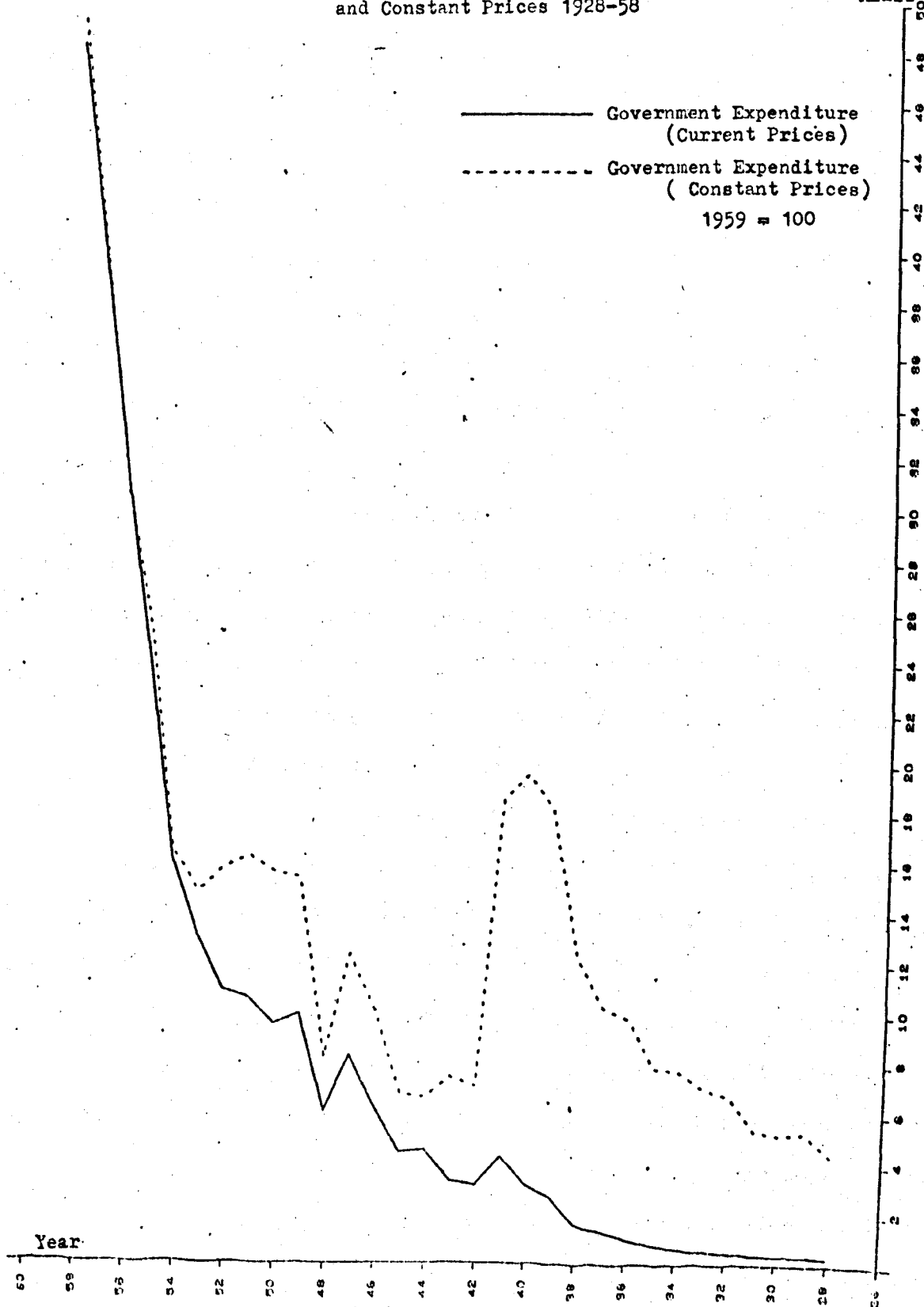
Figure (2-1) shows the pattern of government expenditure during 1928-58 at current prices. The growth is uneven but with a rising tendency. Up to 1938, the government expenditure rose slowly but steadily and after a sharp rise during 1938-41, a considerable fluctuation appeared in the pattern of government expenditure during 1941-49. However, as the same figure shows, in the last sub-period, each successive peak is higher than previous one which can be interpreted as the rising tendency of government expenditure. The rates of growth were around 18.6 percent for 1928-38, 39.8 percent for 1938-41 and around 10.9 percent for 1941-49 (table 2-1). Despite the lack of data on national accounts, one may fairly assume that the rate of growth of government expenditure was higher than national output, at least for a considerable period, if there were no inflationary effects.

However, when the pattern of expenditure at constant prices (1959 prices) is considered, the tendency to rise disappeared for 1941-49 period. As figure (2-1) shows after the first peak in 1941, the level of public expenditure dropped to 6460 Million Rials by 1944 which was below the 1932 level of government expenditure. Also, the successive peaks after 1941 remained below that level until 1955. This considerable decline of government expenditure in real terms is clearly manifested in the pattern of per head government expenditure which also takes into account the growth of population. Although it shows a further reduction in real terms, the pattern remained the same as that of government expenditure at constant prices (fig-

Figure (2-1)

Government Expenditure at Current
and Constant Prices 1928-58

Billion
Rials



Source: Back Ground Table 1

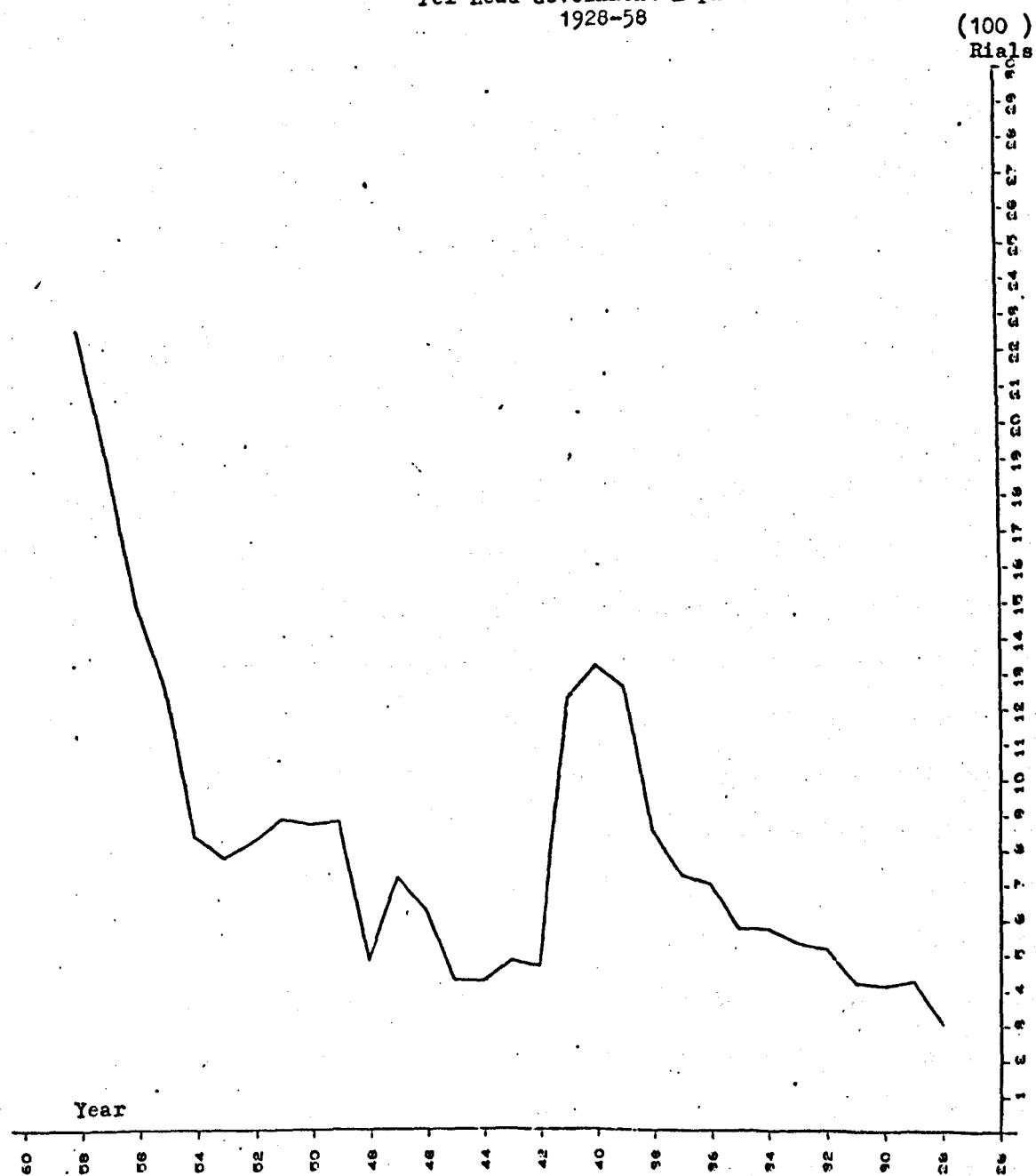
ure 2-2).

It is true that Iran underwent a serious socio-political and economic crisis during and after World War II, but the seriousness of the crisis of public expenditure was greater than that of the national economy. In the absence of national accounts, one may safely assume that in an economy with a large agricultural sector (around 80 percent of GNP) the fluctuation in the real per capita income is much narrower than what the above pattern of government expenditure has illustrated. At least, a tentative estimation of national income by Bharier¹, shows that the Iranian economy recovers soon after the crisis. Therefore, if one intended to relate the rising of government expenditure to the rising of per capita income, the above pattern would be a complete failure.

In order to understand the importance of the rising of per capita income with regard to the pattern of government expenditure, one should realize the different roles of income as an economic factor on the supply of and demand for public expenditure in different stages of development. Although the demand for public goods can be treated as luxury goods, demand for which rises along with the rising of income, such treatment is largely limited to the government social services in a society where the capitalist state has dominated and the democratic process reflects the social pressure to the surface. This cannot be the case for a state in the transitional period which is challenging the old rooted feudalistic structure and seeking the expansion of its bureaucratic machine and security forces to ensure its domination. However, the existence of potential demand for public goods is one thing and its realisation is another. There is a need for a bureaucratic machine to produce the necessary public goods and to channel the appropriate income to the public sector. In other words, in this stage of economic development, the realisation of the demand for public goods is not only limited by low income, but more importantly, by the institutional barriers and state

Figure (2-2)

Per Head Government Expenditure
1928-58



Source: See Back Ground Table 1

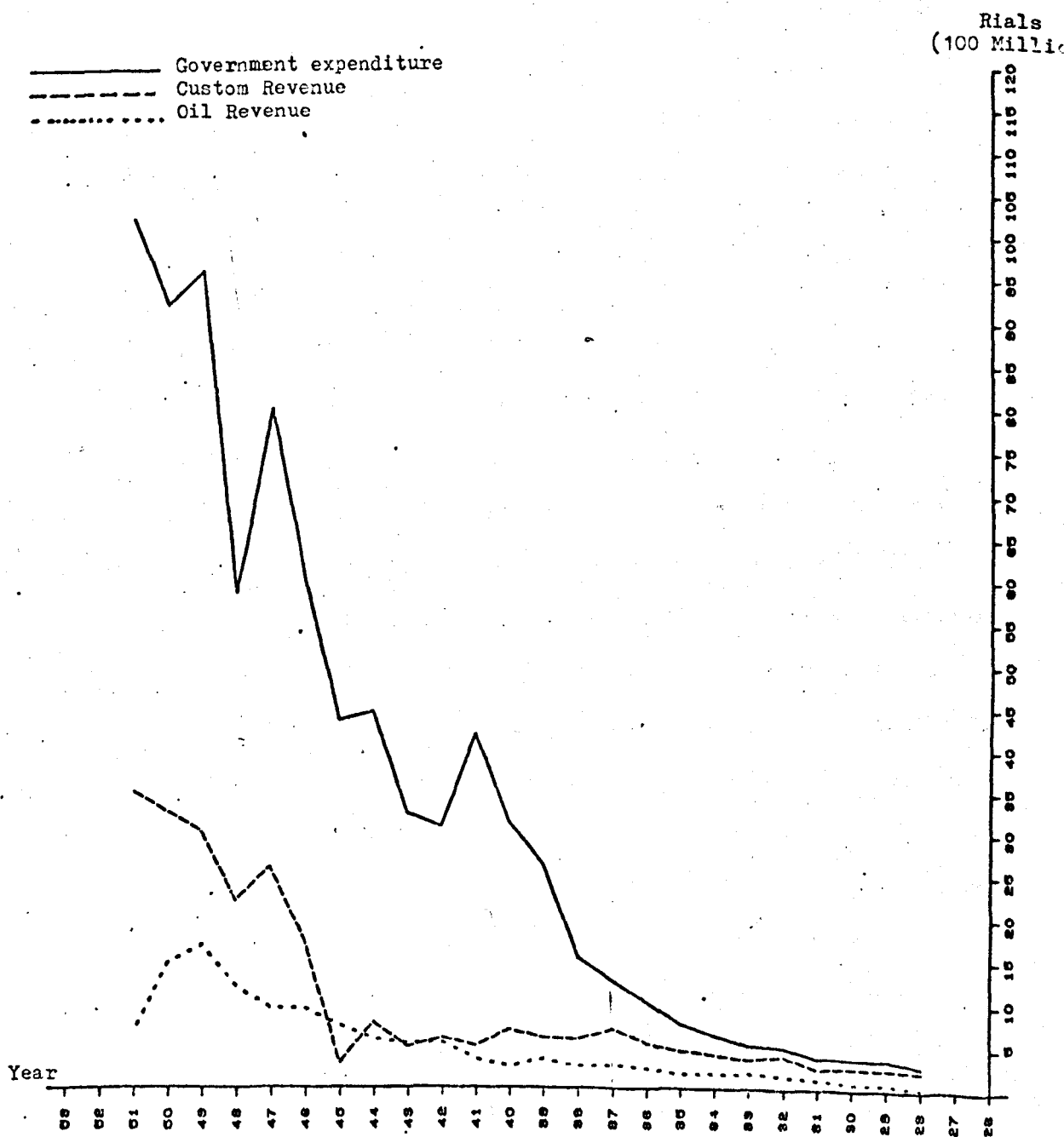
machine.

However, on the supply side, the rising of income may facilitate an increase in government revenue by raising the taxable surplus and the degree of monetization. Nevertheless, in the transitional stage, the development of a fiscal system is hampered by the economic and socio-political structure of the society, unless a socio-political upheaval accelerates the process. This brings us to the second stage of our analysis that is the revenue constraint.

Revenue Constraint and Displacement Effects

The level of government expenditure is related to the two main channels of government revenue, taxation and deficit financing. However, both channels are limited by economic and socio-political factors. As far as taxation is concerned, the limitation is imposed by the large subsistence agricultural sector, low degree of monetization and the power of landlords in the political structure of the society which hamper the development of a fiscal system. This limitation is important since in the absence of an efficient income taxation, the bulk of government revenue has to come from indirect taxes and in particular customs duties, in the very early stages of capitalist development (see chapter 6 for detailed argument). Therefore, in this stage, government expenditure may be limited to what the government can collect through custom duties. Figure (2-3) shows the pattern of customs and oil revenue along with the pattern of government expenditure at current prices. It appears that up to 1936-37 a close link exists between the patterns of government revenue and expenditure, but a significant divergence between the two patterns developed during 1936-45. The revenue not only did not keep up with the expenditure, it also declined. The declining trend of customs revenue can be attributed to the structure of customs duties (see chapter 6), the gradual development of demand for capital goods, the

Figure (2-3)
Government Expenditure, Custom and
oil revenue (1928-51)



Source: Back Ground Tables 1 and 2

loss of exports and combating inflationary pressure after 1941.

Since the government was not able to raise its revenue sufficiently to cover its expenditure, it resorted to deficit financing particularly from 1936 onwards (for this year, deficit financing accounted for 31.4 percent of government expenditure)². The limitation on deficit financing is clearly imposed by the inflationary pressure which developed rapidly during 1941-3 (the cost of living rose by about 40 percent)³. However, the question may be why the inflationary pressure did not appear before 1941, the year of occupation of Iran by Allied Forces. Both economic and socio-political factors are involved.

First, the type of government expenditure during 1936-41 may have been an important factor. As we will explain later (P.51), government expenditure on economic activities rose rapidly during this period; this covers industry, mining and communication. These productive investments may have raised the overall productivity and have alleviated the inflationary pressure. Secondly, Reza Shah with his dictatorial power was able to bring about an equilibrium among the political forces (landlords, national bourgeoisie and others) which created an appropriate condition for the gradual development of capitalism.

However, the occupation of Iran by Allied Forces in 1941, on the one hand, led to the stoppage of development investment and the failure of some of projects which created an uncertainty on the side of private sector. On the other hand, Reza Shah's forced abdication of the throne resulted in an unstable equilibrium in the balance of power of the political forces. This situation aggravated the existing weakness of the bourgeoisie. One may speculate and say that, at least temporarily, and for a short time, the central government lost its power and a tendency toward a feudalistic decentralization appeared during 1941-46 in particular. Under these conditions

Annual Growth Rates
Of Government Expenditure

Table (2-1) Percentage

	<u>1928-58</u>					
Year	1928-38	1938-41	1941-49	1949-58	1928-49	1928-58
Rate of Growth	18.6	39.8	10.9	19.6	18.4	29.4

Source: Back Ground Table 1

Annual Growth Rates of Functional
Government Expenditure

Table (2-2) Percentage

	<u>1928-58</u>			
Year	1928-38	1938-43	1944-48	1928-48
General Affair	13.8	18.1	11.5	16.4
Defence Affair	13.7	19.9	10.8	14.4
Social Affair	18.8	24.4	18.9	20.6
Economic Affair	36.7	- 3.7	- 5.1	15.6

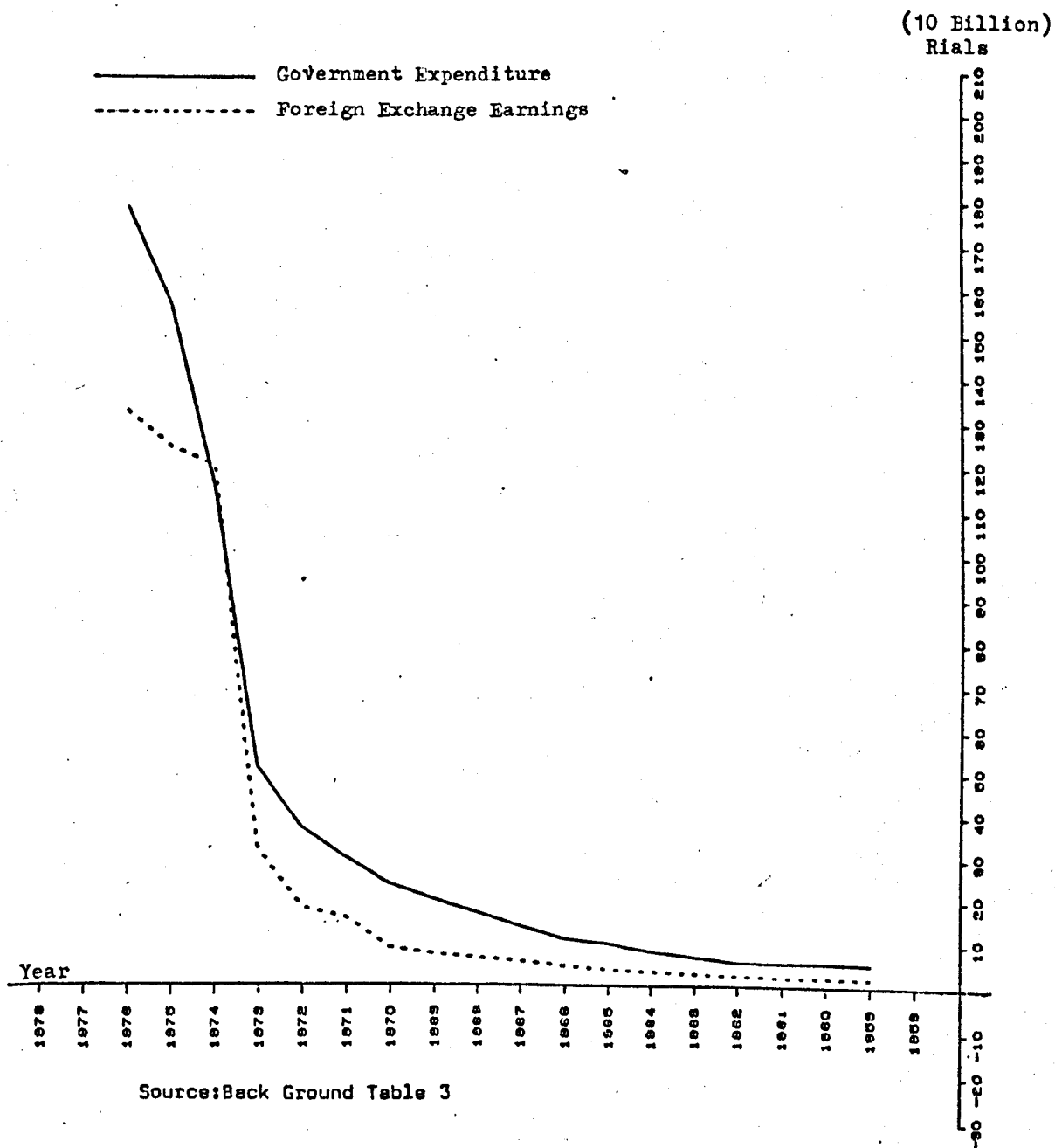
Source: Back Ground Table 4

the development of a fiscal system, in particular income taxation, came to a halt (see chapter 6). Also, the inflationary pressure added to the socio-economic problems by reducing the government revenue from the custom duties (see chapter 6).

However, after the war, the balance of political power turned in favour of the bourgeoisie and alongside the central government strengthened its control on the whole of the country. The socio-political changes reflected themselves in the development of government revenue and expenditure during 1946-9. It was accompanied by the rising of oil revenue and the custom duties. But, it did not turn in to a social upheaval until 1951-3 when the national bourgeoisie showed its strength and challenged British power and the oil company (see chapter 8). Although the militant fraction of the bourgeoisie lost its ground, the voice of the bourgeoisie and its influence reflected itself in the structure of the new government after 1951-3.

By the restoration of oil revenue in 1954, the trend of government revenue and expenditure diverged from its normal pattern and rose rapidly. One may attribute the change to displacement effects occurring during 1951-3, but there is an important difference between the nature of displacement effects in a developed economy like the U.K. and that in Iran. In the former, an external shock, which causes social upheavals, bridges the gap between the desirable level of expenditure and the tolerable burden of taxation. In other words, the change created in this way is indigenous and is within the fiscal system. In the latter, the change with respect to the fiscal system is exogenous and remains exogenous to the system. Therefore, with the disappearing of such exogenous factors, the fiscal system would not be able to bridge the gap between the desirable level of expenditure and tolerable burden of taxation. However, this exogenous factor has been the main determinant of the level of government expenditure since 1954. As figure (2-4) shows the pattern of government expenditure is almost entirely

Figure (2-4)
 Pattern of Government expenditure
 and Foreign Exchange Earnings
 During 1959-76 at current
 Prices



dependent on the pattern of the government foreign exchange earnings or in other words oil revenue.

Now we proceed to evaluate the effects of socio-political factors and the revenue constraint on the allocation of government expenditure to its functional duties.

2-1-1 Government Expenditure By Functions

Historically, up to 1949 (the start of the first development plan) the government expenditures were allocated to the responsible ministries for development and non-development purposes. In order to trace the trend of the government expenditure according to the four functions, we have to group the expenditure of responsible ministries according to their respective functions.

A. General Affairs

This group covers those ministries which are mostly concerned with administrative activities. Foreign affairs, justice, court, interior-general (including Police and Gendarmaries), trade and finance come under this classification.

B. Defence Affairs

This concerns only the expenditure of the Ministry of War.

C. Social Affairs

This covers public health and education.

D. Economic Affairs

This group of expenditure covers the infrastructure and productive activities. It includes the ministries of communication, post, telegraph and telephone, agriculture, industries and mines.

Although the latter three groups include administrative expenditure, these expenditures are negligible relative to their main functions.

General Affairs

Figure (2-5) shows the functional composition of the government expenditure for 1928-48 at current prices. As the figure shows the government expenditure for this group in absolute terms rose slowly during 1928-38 and after a decline in 1939-40, a sharp and continuous increase can be observed. Whether such a trend existed in real terms and relative to the GNP, in the absence of data on national accounts is hard to say. However, the annual rates of growth of general affairs expenditure for 1928-38 and 1944-48, which enjoyed a fairly stable prices, were around 13.8 and 11.5 percent respectively (table 2-2). Allowing for some rates of inflation during these two sub-periods, the rate of growth of government expenditure in this group may have been around the rates of growth of the GNP, if not higher. It seems that this study, similar to some other case studies, shows that the share of general affair expenditure in the GNP is fairly stable. However, there are statistical and conceptual difficulties about this category of expenditure and also there is no satisfactory theoretical explanation for the change of general affairs expenditure during economic development; and therefore drawing general conclusions is impossible. As has been explained some speculations have been made by studying the relationship between administrative expenditure and productivity and between administrative cost and the cost of production in manufacturing; but neither of them shows any conclusive result for government expenditure⁴:

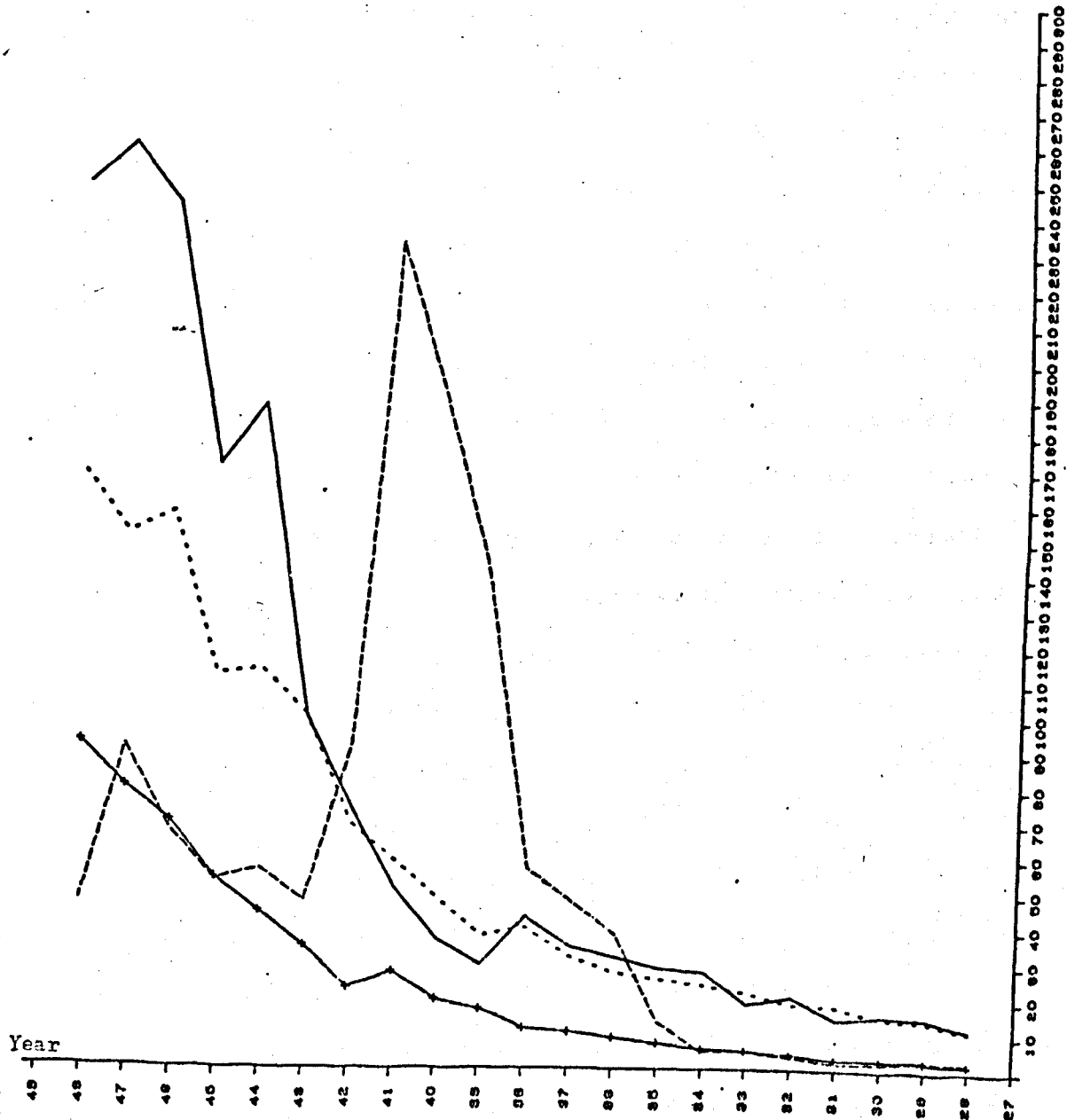
However, it can be argued that general affairs expenditure has first priority for the capitalist state in the early stage of economic development since the public goods provided in this category are vital to ensure the existence and domination of the capitalist state. Therefore, under the effect of revenue constraint one should expect that this group of expenditure accounts for a high share of government expenditure. In the later stage of

Figure (2-5)

Components of Government Expenditure
1928-48

— General Affairs Services
 Defence Services
 * * * * * Social Services
 - - - - - Economic Services

(10 Million)
Rials

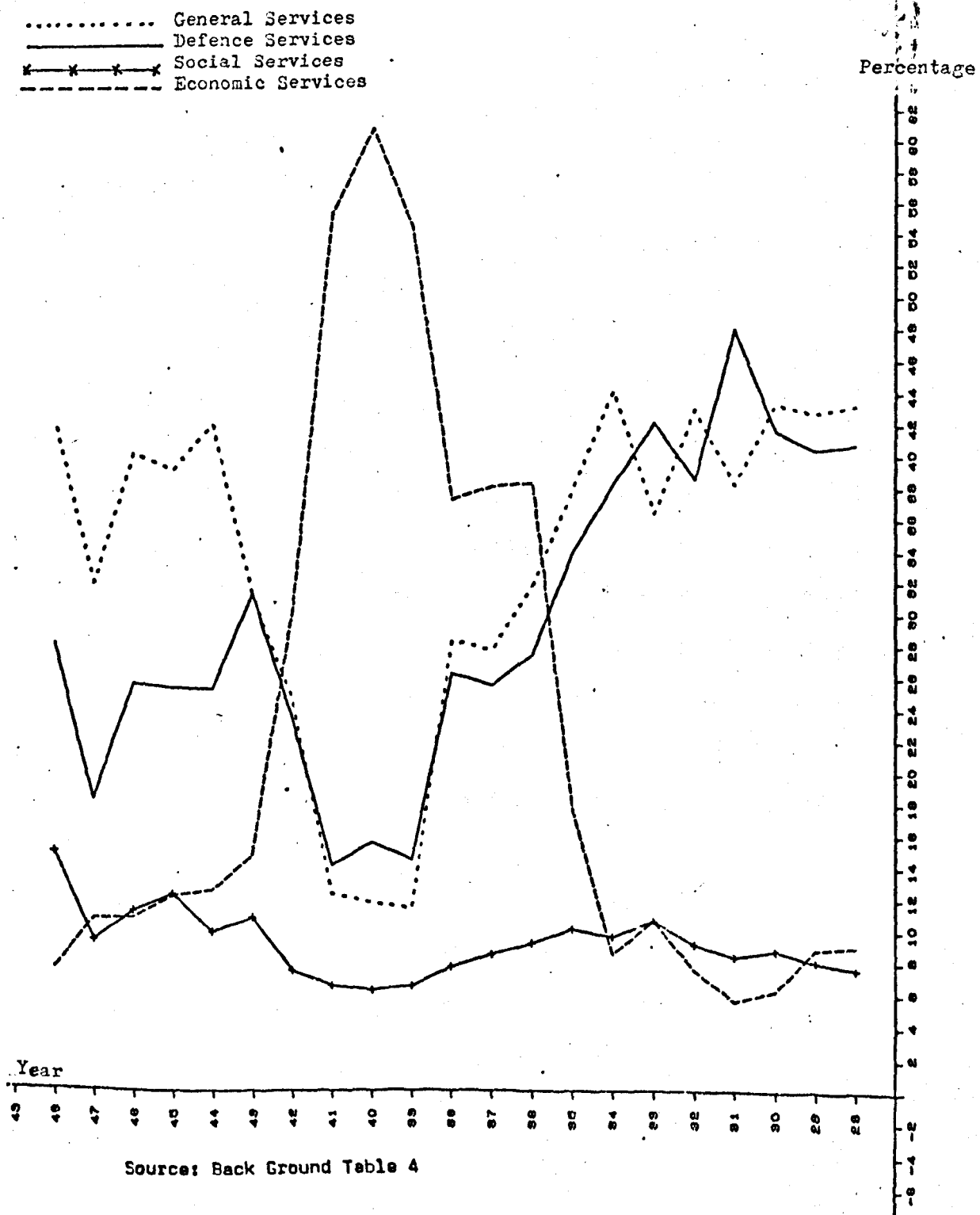


Source: Back Ground Table 4

economic development, although these services should necessarily , by their nature, be provided by the central government, their share in the total government expenditure will decline when the state machine is sufficiently expanded and the need for social reform has arisen. As figure (2-6) shows the share of general affairs expenditure in the total during the 1928-36 and 1944-48 sub-periods remained as high as 40 percent which indicates the importance of the expansion of the state bureaucracy. The establishment of modern Iran after the mid 1920's came with the expansion of administrative activities in all aspects, expansion of modern financing, justice and appointment of governors by the central government. Also, World War II created the socio-political atmosphere for accelerating the concentration process. After a short period of political instability, the position of the national bourgeoisie was strengthened and consequently more power was transferred to the central government. Along with this development a higher share of government expenditure was allocated to the general affairs category.

Concerning the period of 1937-44, one may observe a divergence from the normal pattern of general affairs expenditure. The share of this category in the total government expenditure declined to 11.4 percent in 1939 which may be interpreted as a change in the trade-off point of different government expenditures. In this respect, the share of economic expenditure rose very rapidly. But, this may well be a misinterpretation because the general affairs and economic expenditure were financed through different channels. The type of revenue constraint imposed on these two groups of expenditures are different. The government may have treated the economic expenditures as self-financing investment in the sense that productive investment will increase the overall productivity and increase the real output⁵. Based on this assumption, a relatively huge amount of economic expenditure was financed through deficit financing. Taking into account that other government expenditures including the general affairs category were financed through

Figure(2-6)
Components of Government Expenditure
1928-48 (Percentage)



taxation, one may argue that there may not have been any trade-off between the share of general affairs expenditure and that of the economic expenditure during this sub-period.

Defence Affairs

The defence expenditure depicts a similar pattern to that of general affairs, increasing in absolute terms for the whole period, rising relative to the total expenditure during 1928-38 and 1944-48, and declining during 1938-44 (figures 2-5 and 2-6). With more or less the same rates of growth to those of general affairs (table 2-2), it can be said that the share of defence expenditure in the GNP was stable, if not rising.

However, in order to explain the behaviour of defence expenditure, some economists have tried to relate defence expenditure to economic factors. But, it seems to us that these investigations are not satisfactory and the determinants of defence expenditure are socio-political and not subject to economic analysis in a developing country. The explanatory factors such as the GNP would not explain the high share of defence expenditure in these countries.⁶ Also, some economists attributed the high percentage of defence expenditure to the natural wealth of countries⁷, but the comparison analysis of the composition of government expenditure in developed and under-developed countries does not support this idea⁸.

However, it is possible to argue about economic effects of defence expenditure on the employment, effective demand, and protection of the international market in the case of developed countries in which defence expenditure allows the armament to maintain production and protect the necessary markets. But for a developing country in the early stage of development when the capitalist sector accounts for a very low share of national product and the economic structure of the society is mainly based on the feudalistic agricultural system, the consideration of the effects of defence

expenditure on the employment and industrial output as a determinant of the share of defence expenditure in the total government expenditure is highly irrelevant (see also chapter 5). In this stage of economic development a combination of socio-political factors determine the role of army in the society.

However, it could be said that the protection of a country's territories and the maintenance of internal security are the first function of the central government. One may even emphasise the latter duty as the most important and vital function of the capitalist state in the early years of its existence. Also, the role of army is important to ensure the expansion of the domestic market by reducing the power of big feudal lords in different areas and imposing the control of the central government on the whole of country. The destruction of the power of big feudal lords which was a threat to the power of the central government was the first function of Reza Shah's army in the 1928-38 period. Thus it is not surprising that defence expenditure shows a high percentage at the beginning of the recognition and establishment of national army in Iran after the mid 1920's. Also, after World War II, the rising of the national bourgeoisie, thereby recognition of national sovereignty, gave more weight to defence expenditure. It was accompanied by an increase in the expenditure of the internal security forces in the general affairs expenditure. Both these expenditures show that the role of the state in the transitional stage is gradually subjected to the political interest of the rising classes with a movement towards the imposition of the necessary institutional structure. In this respect the displacement effects such as war and socio-political disturbances would accelerate the process of domination of the rising classes.

Concerning the period 1938-44, similar to the case of general affairs expenditure, the pattern should not be interpreted as the decreasing impor-

tance of the defence expenditure relative to the economic expenditure, when the effect of revenue constraint is considered (see above PP for the argument). Not only did the importance of defence expenditure not appear to be declining in the period under study, it also continued to account for a high share of government expenditure (35 percent of the total)⁹ in the early 1950's despite the interruption of oil production.

Economic Affairs

As figures (2-5 and 2-6) show the economic activities of the government up to 1934 was extremely low due to the above-mentioned socio-political factors. In other words, during this period the necessary state machine did not exist to carry out and govern the economic activities of the state. With a relative stability during 1935-41, the government tried to stimulate the economic growth by increasing its investment in the infrastructure and industrial sector. In this way, by its expenditure on roads, rail ways and ports, the government made an attempt to expand the domestic market by reducing the cost of transportation. Also, by its investment in manufacturing the government tried to open a new way to the industrial bourgeoisie and encourage entrepreneurial talents to establish a private industrial sector. As a state in the transitional stage, the Iranian state tried to provide the necessary conditions and incentives for the development of the capitalist sector.

However, a financially weak government could not have financed the huge amount of economic expenditure through its tax revenue. Although some part of the investment in rail way construction was financed through earmarking the 'sugar and tea' tax and oil revenue, the lion's share was financed through borrowing. Therefore, as was explained that part which financed through deficit financing could not have directly affected the trade-off between economic expenditure and that of other government functional expenditures. In other words, the increase in economic expenditure was not at the cost of reducing expenditure on other government functions.

However, due to the occupation of Iran, a limitation was imposed on the expansion of economic expenditure by the inflationary effects. In order to control the inflationary pressures, the government's first action was to cease deficit financing which directly affected economic expenditure. By 1943 the level of economic expenditure in absolute terms returned to the 1936 level and its relative share in total government expenditure continued to decline and reached 8 percent in 1948 or almost the lowest level for the period 1928-48.

From the above explanation, one may conclude that economic expenditure is not considered as vital to the existence and survival of the capitalist state in the early stage of development. Also, relative to the level of government revenue at this stage, the economic projects are too costly to be financed through taxation. Moreover, they are not part of current government expenditures, therefore, they can easily be ceased without creating further commitments. For all these reasons, under the effect of revenue constraint, this group of expenditure is the most sensitive government functional expenditure and suffers from being accorded the lowest priority.

Social Affairs

Social affairs expenditure had a fairly stable position during the 1928-48 period. Its share in total government expenditure fluctuated between 7.6 and 10.2 percent for 1928-38 and between 6.6 and 15.2 percent for 1939-48. (figures 2-5 and 2-6).

A large share of social affairs services was allocated to education, expansion of which suffers from a low priority: Firstly, the demand for education is highly dependent on the demand for skilled manpower and an economy in the early stage of capitalist development may not be in urgent need of such services. Secondly, the limited demand for education can be met by the private sector (see chapter 5). Thirdly, the lack of this group

of services at this stage may not jeopardise the existence of the capitalist state. However, the slow growth rate of social services expenditure conforms to the early stage of development and the growth of urbanization. As other case studies show, the government expenditure in social affairs increase with the acceleration of economic growth.

To sum up the above explanation for the change in the composition of government expenditure, we would say that general and defence affairs are the first functions of the central government, and they are subject to the social and political structure of the country. Taking a country in a transitional stage, the state's expenditure goes to those socio-political institutions which ensure the state's existence. In this state of affairs, social and economic activities come as a secondary function unless the state finds its position stable. Clearly, in this stage of development, revenue constraint discriminates against the latter two. Nevertheless, due to the productive nature of economic expenditures, they can be carried out above the limitation imposed by the level of tax revenue. But, still the level of such expenditure is restrained by the inflationary effects of deficit financing (see also chapter 7).

The available data for the 1950's allows us to carry on our analysis of the effects of the revenue constraint on the allocation of government expenditure to capital and current services. This would clarify the differences in the effects and the nature of revenue constraint after the 1951-3 displacement.

2-1-2 Current and Capital Expenditures 1949-59

In 1949 the Plan Organization (P.O.) was established and the first seven years plan was introduced. The P.O. was responsible for development projects but recurrent expenditure were allocated to the responsible minis-

tries through the Ministry of Finance. The development plan was to be entirely finance through the oil revenues. However, the first plan was never implemented. The oil crisis of 1951 cut off the flow of foreign exchange to the P.O. The restoration of the oil revenue in 1954 could not rescue the failure of the first plan. Practically, the oil revenues were utilized for current government expenditures¹⁰.

The second development plan was not as successful as had been expected. The oil revenue were divided between the P.O. and the Ministry of Finance at the rate of 80 percent and 20 percent respectively. But, in 1957 the government reduced the P.O.'s share to 60 percent and again in 1958 to 55 percent. The main reason for the reduction of the P.O.'s share from the oil revenues was the interruption of the expected foreign loans to the government of Iran. The government's financial position during this period shows that the government of Iran was not concerned about its revenue in Rial terms. Whereas the budget estimates show positive balances, the actual figures show large deficits which have been financed through borrowing from the Melli Bank and printing money¹¹. This state of affairs which started in 1954 was accompanied by the expansion of the government's ordinary budget. The increase of wages and salaries in the public sector and the introduction of new government agencies resulted in the expansion of government expenditure in general affairs¹². During this period, the defence expenditure was as high as 35 to 40 percent of the total government expenditures¹³.

This process resulted in the devaluation of the Rial in 1958. Since it was not sufficient, a reduction in the P.O.'s share of oil revenue was necessary to meet the foreign exchange needs for reducing the inflationary pressure. However, the government did not reduce its ordinary expenditures and still resorted to the central bank (Melli Bank) for financing its expenditures: e.g. during 1958-9 the government's debt to Melli Bank increased by 56 percent¹⁴.

What the above explanation reveals is that during the 1950's the revenue constraint in terms of the Rial had no effect on the composition of government expenditures since the government of Iran did not make any attempt to control the money supply through the application of fiscal policy. The foreign exchange constraint affected the development projects rather than ordinary government expenditures. This was largely due to the fact that whereas the effect of foreign exchange constraint on the investment in the development projects are tangible and direct, its effect on the government consumption is indirect and invisible since the payments are largely paid in Rials.

With this historical background in respect of the expenditure determinants and the reactions of the government in the case of revenue constraint, one may expect that Iran should have a normal pattern of public expenditure during the 1960's. First, because Iran was fairly stable politically during the 1959-76; and secondly, the foreign exchange constraint felt by the government of Iran has not appeared as an obstacle, due to the increase in the oil revenues and the increase in the government's credibility for the acquisition of foreign loans. Therefore, the pattern of government expenditures should have an economic rationality and its effect should be subjected to economic criteria.

2-2 Pattern of Government Expenditure During 1959-76

In the previous period we traced government expenditure in absolute terms and explained the fluctuations of the public spending allocated to the four functional categories by the socio-political upheavals during the period under study. However, due to the lack of data on the national income we could not examine the increasing share of government expenditure in the economy, although we made an attempt to explain the pattern by using some

guess estimates of the national income. Now, we can return to this question in the 1959-76 period.

Permanent Effects

As figure (2-7) shows government expenditure has grown very rapidly. It presents an annual growth as high as 23.1 percent on average. The growth rates have not been steady; sluggish at the beginning, rapid during 1963-5, slowing down between 1965-71, exceedingly rapidly between 1971-4 and slowing down between 1974-6 (table 2-3).

When the pattern of government expenditure relative to GNP is considered, a more or less similar pattern emerges. One may attribute the rising of the government expenditure ratio to the rising of per capita income. In other words, the 'ratio-income-elasticity' is positive and the 'income-elasticity' of demand for public expenditure tends to exceed unity as the following logarithmic function shows (for both equations, the coefficients of regression are significantly high). (For data, see Background table 5).

$$(1) \text{ Log } E/P = -4.0317 + 1.2703 \text{ Log } Y/P \quad R^2 = 0.983 \quad DF = 16$$

(-30.73)

$$(2) \text{ Log } E/GNP = -0.0221 + 0.3198 \text{ Log } Y/P \quad R^2 = 0.784 \quad DF = 16$$

(-7.6)

As functions (1) and (2) indicate one unit increase in the per capita income is accompanied by a 1.2703 units rise in the per head government expenditure or 0.318 unites of the government expenditure ratio. On the assumption that the figures relating to 1973-76 are extremely high relative to the 1959-71 figures and this may affect the relationship between per capita income and government expenditure, we excluded the 1972-76 period from the regression. The result appeared to conform to the above relationship with the same significant coefficient of regression. It seems the effects of the increase of income on public expenditure had even been higher during the 1959-69 period that is one unit increase of per capita income generated 1.85 units of the per head public expenditure.

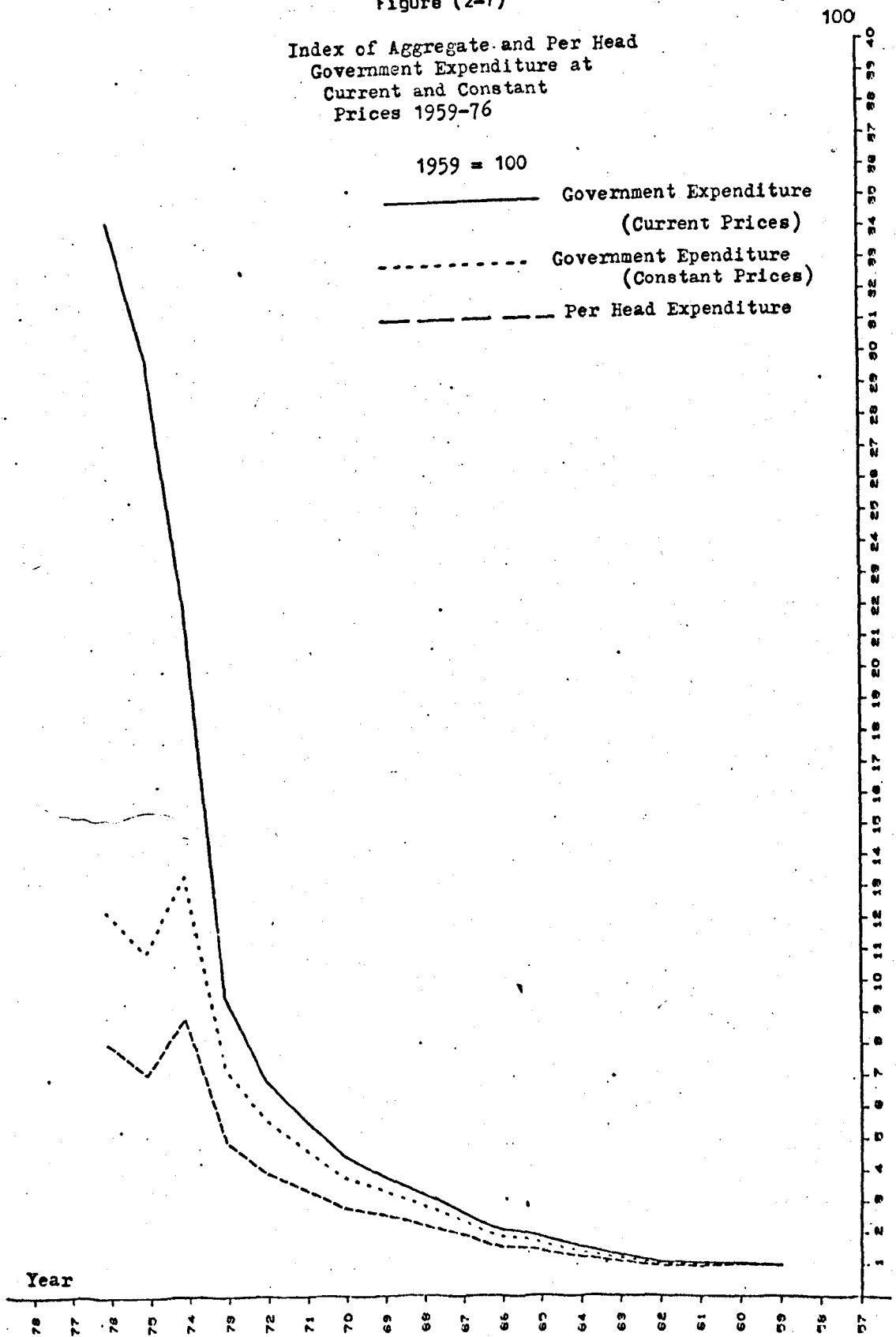
Figure (2-7)

57

Index of Aggregate and Per Head
Government Expenditure at
Current and Constant
Prices 1959-76

1959 = 100

———— Government Expenditure
(Current Prices)
----- Government Expenditure
(Constant Prices)
----- Per Head Expenditure



Source: See Back Ground Table 3

$$(3) \text{ Log } E/P = -9.6657 + 1.8560 Y/P \\ (-21.51)$$

$$R^2 = 0.981 \quad DF = 9$$

The above income elasticity suggests that along with the increase of income per capita, government expenditure rises at a faster rate. For those who advocate the demand influence, the reason is that since the public services are income-elastic, demand for such services will rise faster when income per capita grows. This may also suggest that the government will be able to finance its expenditure, for the supply of necessary public goods, through its conventional channels of financing. In other words, with the rising of income, not only the demand for public goods will grow, but also, alongside the income elasticity of the tax system will rise (see also chapter 6). Income elasticity may be the key point in the above argument. This may be interpreted that the sequence of causes is from per capita income to government expenditure and revenue. However, as we will explain later, this sequence of causes can be questioned in the case of Iran. Before we answer this question we will look at the impact of other permanent effects on the pattern of government expenditure during this period.

The pattern of government expenditure in absolute terms at current and constant prices show that along with the rising of government expenditure the gap between the two patterns has gradually widened. But, while up to 1974 both patterns moved in the same direction and with a lower rate of growth during 1972-4, under the inflationary pressure of 1974-76, real government expenditure did not show any improvement and a huge gap between the two patterns appeared. Even in 1975, real government expenditure declined accounting for only 36.2 percent of the government's expenditure in money terms (figure 2-7).

When the pattern of government expenditure ratio at current and constant prices are considered, the general patterns are more or less the same and moving in the same direction with minor differences in the rates of

Annual Growth Rates of Public Expenditure
At Current and Constant Prices
and Per-head for 1959-76

Table (2-3)

percentage

Year	1959-62	1962-65	1965-71	1971-74	1974-76	1959-76
Public Expenditure at Current Prices	2.0	21.0	19.7	79.3	24.6	23.1
Public Expenditure at Constant Prices	0.4	18.8	18.3	54.2	- 4.6	15.8
Per head Expenditure	- 2.5	15.5	15.0	50.2	- 5.1	13.0

Source: Back Ground Tables 1 and 3.

Distribution of Population
By Age-group

Table (2-4)

Percentage

Age - Group	1956	1966	1974
5 - 24	39.6	43.4	47.4
Other	60.9	56.6	52.6
Total	100.0	100.0	100.0

Source: Plan Organization, Statistical Centre, Statistical Year Book, 1976 and the growth of population in Iran, 1976(2535).

Inflation for GNP and government expenditure (figure 2-8). Comparing the patterns of government expenditure in absolute and relative terms, may suggest that the economy as a whole has been affected by government expenditure in money terms during 1974-76 and that it aggravated inflationary pressure. Taking into account that the share of government expenditure was around 50 percent in 1975, such effects can be expected.

The impact of population growth on public spending arises from the fact that some functional types of government expenditure, such as education are affected by the rate of population growth. In this respect, the distribution of population by age would reinforce such demand. The pattern of growth of population in Iran may have been such that would explain a higher demand for these sorts of expenditures. As table (2-4) shows the growth rate for the age-group (5-24) has been higher than average and its share has risen from 39.6 percent in 1956 to 47.4 percent in 1974 which implies a higher demand for public services in education. Also, the higher degree of urbanization calls for another functional type of government expenditure mainly that concerned with the provision of social welfare which results in the growth of public spending at the aggregate level. The relative change in the pattern of population with respect to the share of rural and urban areas in Iran indicates that the share of urban population has rapidly risen during the 1956-74 period that is from 29.6 percent to 46.7 percent (table 2-5). Naturally, the demand for general affairs services such as law and order and for social and economic affairs such as public health and urban development has arisen. However, it is difficult to assess the impact of population growth and the changes it causes to public spending. Here, we have used the per head real expenditure to illustrate the effects of population growth. As figure (2-7) shows, the growth of per head public expenditure is slower but the pattern of growth does not

Distribution of Population
By Rural and Urban Groups

Table (2-5)

			Percentage
Areas	1956	1966	1976
Rural	70.4	59.3	53.3
Urban	29.6	40.7	46.7
Total	100.0	100.0	100.0

Source: Plan Organization, Statistical Year Book, 1967
and The Primary Report of the Census, 1976(2535).

Income Elasticity of Tax Revenue, Non-Tax Receipt
and Public Expenditure for 1959-76

Table (2-6)

Periods	e_t	e_n	N/E	e	t-Value (T)	t-Value (N)	R^2 (T)	R^2 (N)	D.F.
1959-76	+1.025	+1.495	0.73	1.369	-14.63	-35.65	0.930	0.985	16
1959-69	+1.427	+1.878	0.57	1.684	-10.02	-11.53	0.981	0.937	9

$$\log T = a + e_t \log Y$$

$$\log N = a_1 + e_n \log Y$$

$$e = e_t - (e_t - e_n)N/E$$

E/N is an average for the periods

For Source and Data see Bank Ground Tables 5 and 6.

show any significant differences to that of real government expenditure. The effects of population growth appeared to reduce the rate of growth of real expenditure. But, when its effects relative to the GNP is considered, it does not affect the pattern of government expenditure ratio. As figure (2-8) shows the per head expenditure ratio depicts the same pattern to the government expenditure ratio in real and money terms.

Although the population growth and prices have some effects on government expenditures, these effects cannot explain the fluctuation of the government expenditure ratio and its rising tendency during this period. Neither the differences in the rates of inflation for government expenditure and the GNP nor the effects of the population growth appeared to be the causes of the fluctuation of the government expenditure ratios. While these permanent effects do not explain the fluctuation of government expenditure relative to the GNP one may attribute such fluctuation to the effects of the increase of real per capita income on government expenditure. But, as we said above, the effects of, or more precisely, the sequence and direction of such effects can be questioned in the case of Iran.

Revenue Constraint and Displacement Effects

As has been explained, if the rising of income can affect government expenditure, this change should be brought about through the rising of government revenue. Therefore, government expenditure is ultimately limited by the elasticity of the tax revenue (e_t), the income elasticity of non-tax receipts (e_n) and its level including domestic and foreign loans. Assuming a balanced budget, the theoretical relationship between the government expenditure (E), and tax and non-tax receipts will be: $E = T + N$

$$\Delta E = \Delta T + \Delta N, \quad \Delta E = \Delta T/T \cdot T + \Delta N/N \cdot N$$

$$\Delta E = (e_t \cdot \Delta Y/Y) \cdot T + (e_n \cdot \Delta Y/Y) \cdot N, \quad \Delta E/E = \frac{\Delta Y/Y (e_t \cdot T + e_n \cdot N)}{E}$$

$$e = \frac{e_t \cdot T + e_n \cdot N}{E}$$

or

$$e = \frac{e_t \cdot T + e_n \cdot N - e_t \cdot N + e_t \cdot N}{E}$$

$$e = \frac{e_t (T + N) - N (e_t - e_n)}{E} \quad \text{or} \quad e = e_t - (e_t - e_n) N/E$$

Where e = income elasticity of public expenditures, T = tax revenue and N = non tax receipts. Assuming that $N > 0$, $N/E < 1$ and $e_t > e_n$, it is obvious that e would be less than e_t , conditions which approximate to most of the non-oil developing countries.¹⁵

For most of the developing countries, the income elasticity of tax revenue (e_t) is generally constrained by a very large amount of unsatisfied needs which reduce the taxable income (see chapter 6). So far as the ratio of N/E is concerned, in less-developed countries, the reliance on the non-tax receipts is far more important than in developed countries. But there are limits to such channels of financing, mainly the low level of creditworthiness for the attraction of foreign loans and the inflationary effects of domestic borrowing. Also if we consider that the limits to which a developing country can use deficit financing is determined, to a large extent, by its foreign exchange earnings; the level of government expenditure that can be financed in this way depends on the capacity of foreign exchange earning..

Since the foreign exchange earnings are the main determinant of such limits, the pattern of government expenditure in an oil-producing nation may well be an exception among developing countries. In order to consider the effects of oil revenue on the income elasticity of tax revenue and non-tax receipts, we have widened the definition of (N) to cover government revenue from oil. We have some justification for treating the oil revenue as a non-tax receipts, although a large part of the revenue is collected in the form of direct taxation. However, this only shows the accounting procedure, otherwise, it does not bear any of the qualifications for ordinary income taxes. Firstly, oil revenue comes from the utilization of natural resources the value of which is not necessarily related to the productive

work of the present generation and the government revenue from this source is a sort of rent. Secondly, oil companies are not subject to income tax on the companies operating in the country, therefore, practically changes of the tax law do not affect the oil companies. Thirdly, the rates of taxes imposed on the oil companies are determined differently from that of other enterprises. In this respect, many interrelated factors are involved, mainly the bargaining position of the government and the structure of the international oil markets (see chapter 8). Fourthly, oil is a short-life natural resource which may distort the pattern of tax revenue in the long-run. All these factors may affect the share of the government of the oil revenue in a different way from that of other income taxes. Since the oil resources generate short-life income flows, they can be treated as a free gift to the society which like foreign loans would be ceased some time in the future.

With the above adjustment, the income-elasticity of the tax revenue for 1959-76 appears to support the idea of low income-elasticity of the tax system in developing countries. As table (2-6) shows the income elasticity of tax revenue is hardly above unity. The elasticity of non-tax receipts is sufficiently high which has been the main cause of the increase of the share of government expenditure relative to GNP. However, the pattern has been affected by the figure related to the 1974-6 period which has led to an underestimation of the income elasticity of the tax revenue. When the 1959-69 period is considered which depicts a normal pattern, the income-elasticity of the tax revenue seems to be well above unity, although it is lower than that of the non-tax receipts. Therefore, one may argue that a combination of both factors have determined the pattern of government expenditure in the long-run and the pattern can be explained by the revenue constraint and the merits of government channels of financing.

However, while the level of (T) is determined by the rising of GNP

and the related income-elasticity, the level of (N) is determined by external factors (the factors affecting the oil revenue and foreign loans) and, therefore, it is exogenous to the Iranian economy. Here, what we are trying to argue is that since (N) is an exogenous factor, it may cause a change in the income-elasticity of tax system and so creates the changes in the pattern of government expenditure. Table (2-7) illustrates the year by year elasticity coefficients for (T) and (N) which indicates that only for a few years were the elasticities above unity. As it appears, the rising of the coefficient for (N) is accompanied by the rising of the coefficient for (T) either in the same year or with a year's lag. A similar change in the slope of government expenditure can be observed which may be attributed to the combination of the above effects (figure 2-8). One may suggest that the causes for the rising and fluctuations of government expenditure relative to GNP can be the rising and fluctuation of N/GNP . With a change in (N) as an exogenous factor, the economy receives short-term shocks through government expenditure which in turn generates income through the multiplier effects and at the same time raise tax revenue. The existing lag (in some cases) can be attributed to the type of government expenditure with regard to capital and current spending which produce different time lags (from a few month to more than a year).

These shocks can explain the changes in the pattern of government expenditure and its fluctuation during the 1959-76 period. Depending on the significance of the changes in oil revenue, few upward changes with different degrees of importance have been generated in the government expenditure ratios. But, only the 1973-4 change may be called a displacement effect which causes a divergence from the normal pattern of government expenditure (figure 8). However, due to the nature of the cause that is the exogeneity of the factor, the effects of such displacement may be short-run and disappear from the economy after the impact of such change

Year By Year Income Elasticity of Tax Revenue, Non-Tax
Receipts and Public Expenditure for
1959-76

Table (2-7)

Year	e_t	e_n	N/E_1	e	e_o_2	Periods of Shock
1960	1.87	-0.75	0.52	0.51	0.95	
1961	1.36	-1.61	0.51	-0.15	0.25	
1962	0.42	0.25	0.49	0.34	0.35	
1963	1.26	6.00	0.48	3.53	4.20	+
1964	-0.08	3.35	0.55	1.81	2.60	
1965	2.63	2.13	0.59	2.33	3.74	
1966	2.99	-0.16	0.55	1.26	-0.61	
1967	0.27	4.27	0.57	2.55	1.22	+
1968	2.07	2.22	0.61	2.16	1.29	
1969	0.79	1.45	0.62	1.20	0.95	
1970	1.26	0.99	0.63	1.09	1.22	
1971	0.79	1.35	0.63	1.14	3.78	
1972	0.94	1.17	0.65	1.09	0.69	
1973	0.51	0.98	0.68	0.83	1.58	
1974	0.31	2.37	0.79	1.94	3.78	+
1975	5.83	2.02	0.80	2.78	0.26	
1976	0.75	0.39	0.78	0.47	0.21	

Note: 1- N/E is the average of two successive years.

2- e_o is the elasticity of oil revenue relative to GDP.

Source: Back Ground Tables 5 and 6.

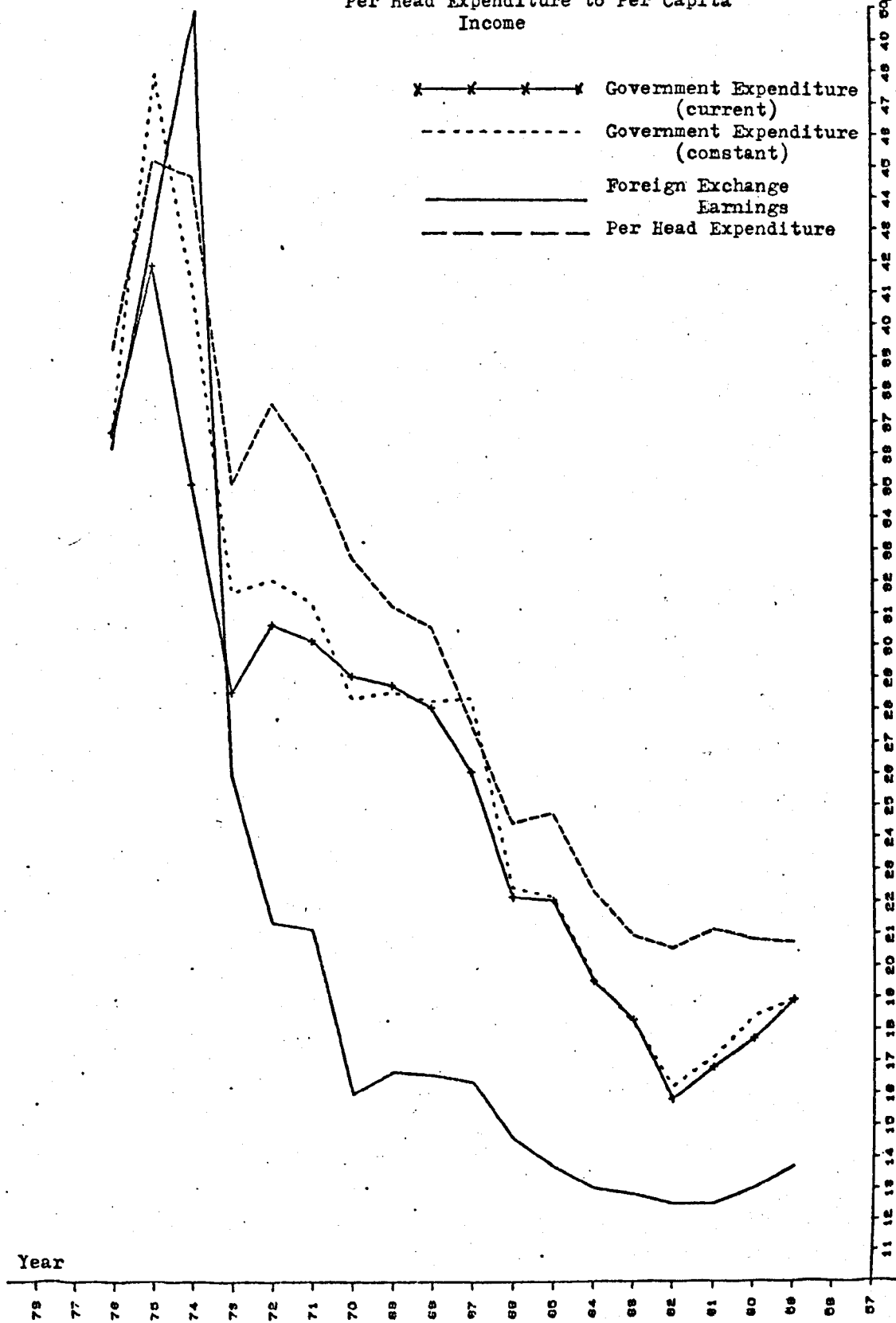
on the fiscal system declines. Unless, the oil revenue continue to increase at a higher rate than that of the GNP, government expenditure is bound to decline relative to GNP. This also means that the income-elasticity of the Iranian fiscal system is low and cannot provide the necessary government expenditure without receiving the external shocks. This would suggest the seriousness of the revenue constraint and particularly the foreign exchange constraint as a determinant of government expenditure. Therefore, one may conclude that contrary to the demand-influence school which relates the rising of government expenditure to the rising of demand and income during economic development, the above explanation shows that the reason for the rising and fluctuations of government expenditure has been the nature of government revenue channels which are exogenously determined and create short-term changes. Also, it seems the sequence and direction of causes and effects are from government expenditure to the rising of income rather than vice versa. With this pattern, one may safely argue that the Iranian fiscal system is not able to increase its expenditure relative to GNP without such external shocks, which have mainly come from oil revenue. Now we can explain the effects of such changes on the pattern of current, capital and functional government expenditure.

2-2-1 Current and Capital Expenditures

After the recession, Iran experienced a rapid economic growth during the 1960's and the early 1970's. The government was very active and its share of expenditure in the GNP moved up from 18.3 percent in 1964 to 42 percent in 1975 (figure 2-8). Due to the effects of revenue constraint and the socio-political determinant of the trade-off between current and capital expenditures, the related patterns do not show similar changes and growth rates to those of government expenditure at aggregate level. Here,

Figure (2-8)
 Ratios of Government Expenditure and Foreign-
 Exchange Earnings to GNP and Ratio of
 Per Head Expenditure to Per Capita
 Income

68
 Ratio
 Percentage



Source: Back Ground Tables 3, 5 and 7.

we will use the budgetary definition for current and capital expenditures and we will try to explain the behaviour of these two groups of government expenditures.

Current Expenditure

Current expenditure is defined as those expenditures which cover wage and salary payments, maintenance expenses, replacement investment and payments on goods for current purposes. In other words, it does not include expenditure for new investments. At least more than 70 percent of current expenditures are for personnel expenditure, in the form of wages and salaries, allowances, and bonuses.¹⁶

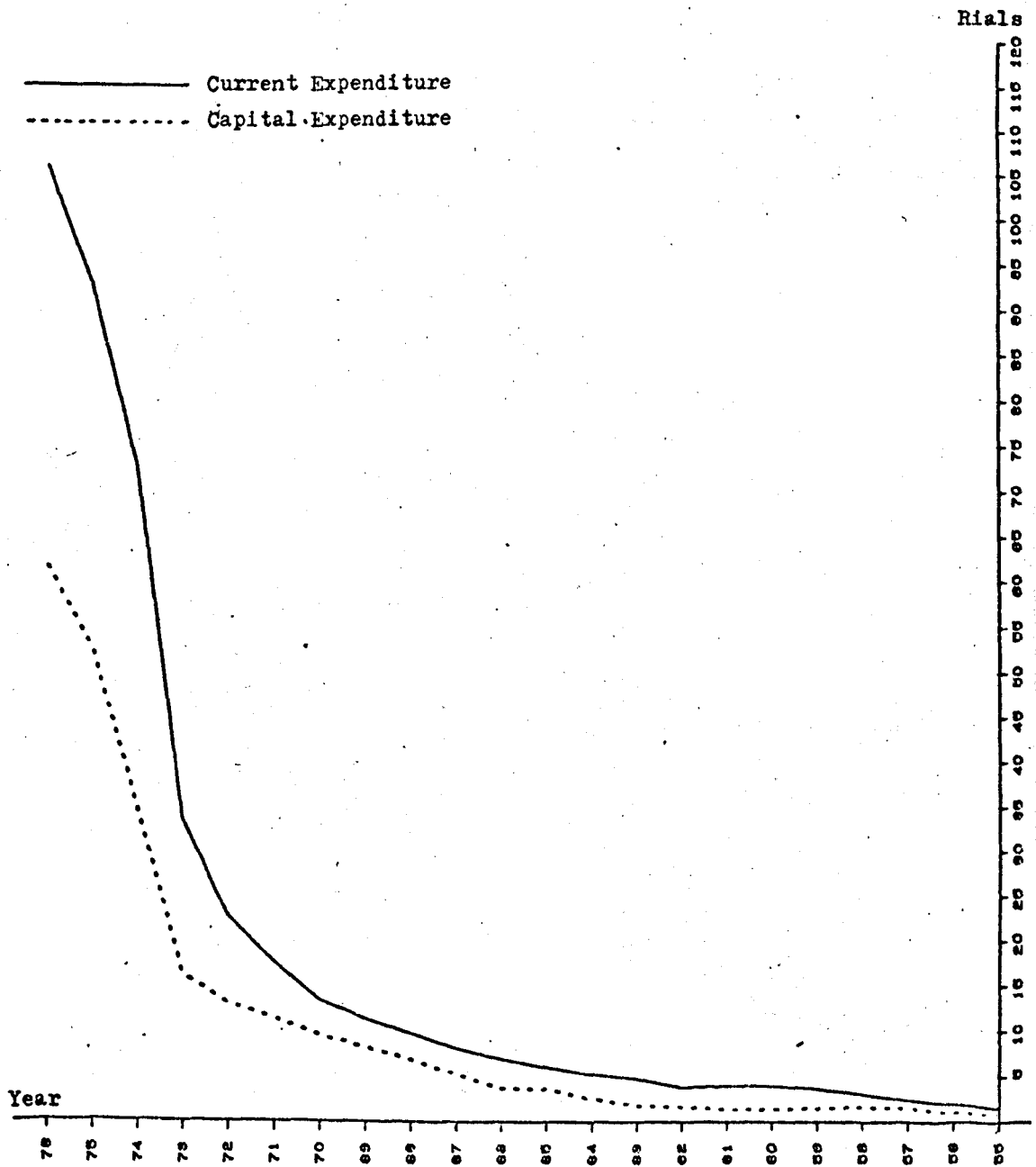
The pattern of current expenditure in absolute terms shows that up to 1970 the growth rates were more or less the same for all years and after a rising tendency during 1970-3, an exceedingly sharp increase can be observed (figure 2-9). However, the above pattern is more or less in the same direction to that of the GNP, although the current expenditure enjoys a higher rate of growth (figure 2-10). Consequently, the pattern of current expenditure ratio depicts narrow fluctuations during 1959-76 with a clear steady upward trend. The share of government current expenditure rose from about 11 percent in 1962 to 26 percent in 1975. Also, current expenditure at constant prices illustrated a similar pattern, although with a somewhat lower rate of growth during 1962-70 and higher growth rates during 1970-76. This difference arises from the different rates of inflation for government consumption and the GNP. However, it does not explain the reason for the rising of government current expenditure (figure 2-10).

The above pattern can be explained by the demand-influence and the priority of current expenditure relative to capital expenditure under the effects of revenue constraint: Firstly, in the absence of any revenue constraint, in line with Engel's law, the rising of public consumption can be justified. The increasing complexity of economic organization along with

Figure (2-9]

Pattern of Government Current and
Capital Expenritures During
1955-76, at Current Prices

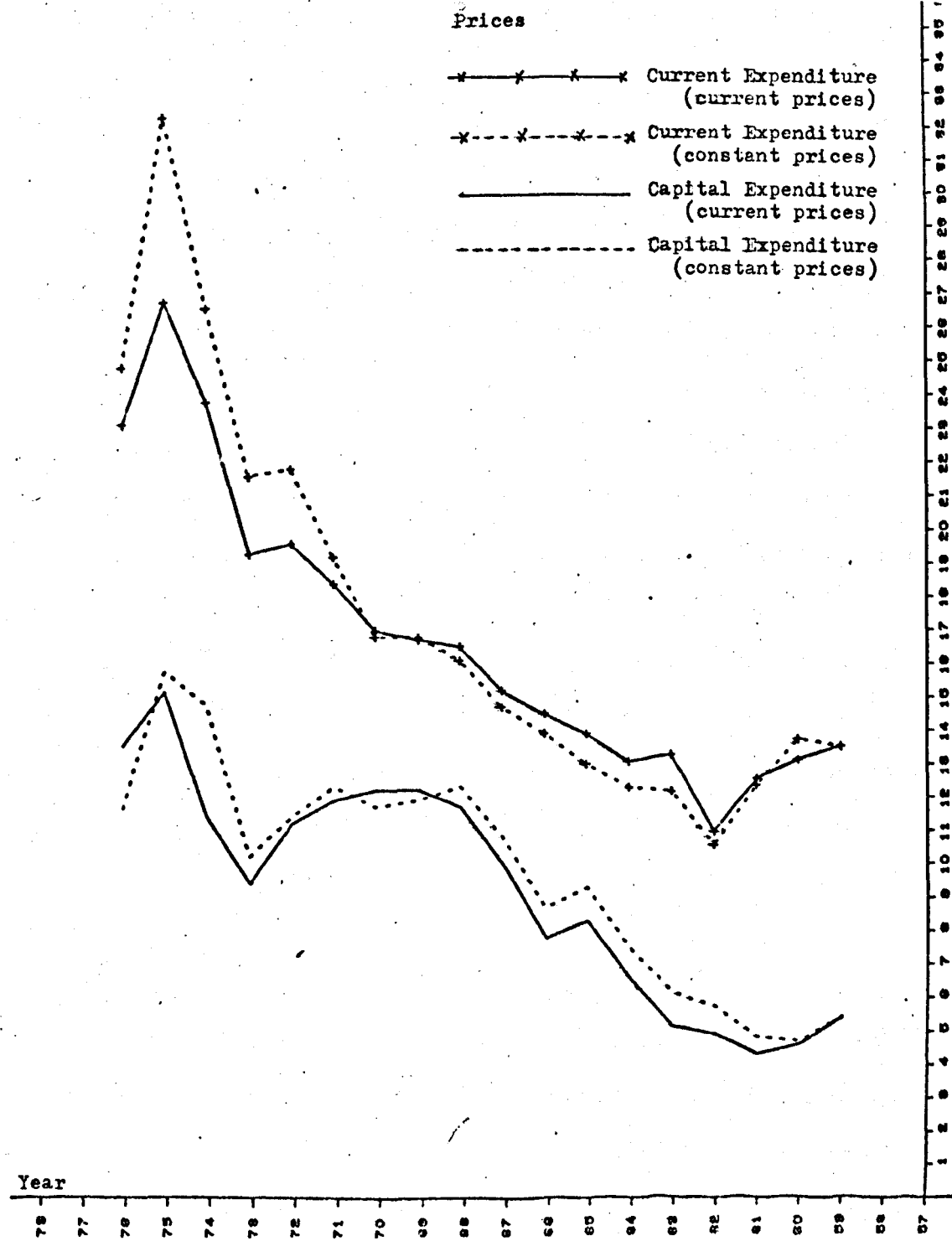
(10 Billion)



Source: Back Ground Table 8

Figure (2-10)
Ratio of Current and Capital Expenditure
To GNP at Current and Constant
Prices

Ratio
Percentage



Source: Back Ground Table 8

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economic development would bring about the conditions for the public remedial activities which would call for a higher public consumption. Secondly, since current expenditure covers those government activities which have already been established, to maintain the existing services, public consumption is the first to be dealt with. Also, employment considerations can be an important factor because the government cannot easily lay off its employees, unlike the private sector. However, most important is the priority given to defence expenditure which is totally financed as current expenditure. As will be explained later (see p82), this factor alone may have been sufficient to increase government consumption. Since the share of defence expenditure is politically determined (see p82), it has given the current expenditure a priority relative to capital expenditure under the effects of revenue constraint. This priority is also reinforced by the other above mentioned factors.

Also, in the occurrence of any displacement, it seems that it would be a matter of preference between public current and capital expenditures recognized by the government which could determine the scope of public consumption. In this respect the socio-political factors have been the major determinants of the allocation of public expenditure between consumption and capital formation in Iran.

Capital Expenditure

Capital (or development) expenditure is defined as expenditure relating to the government's investment operations. " These are mainly ' not current' or 'current' in nature and form part of the functions of the government for a limited period of time only. Thus the construction of a road, a school or a hospital is a development and investment operation, but once construction is completed maintenance thereof is a current government function expenditure whereon must be funded from the Ordinary Budget."¹⁷

Figure (2-10) shows the capital expenditure ratio for 1959-76. It

illustrates a different pattern from that of current expenditure. There is no regularity in the pattern and its share in the GNP fluctuated between 4.9 percent to 14.5 percent. We have used real capital expenditure in order to show whether the irregularity is affected by the permanent effects. The share of real capital expenditure in the GNP shows a higher percentage relative to that in current prices for most of years, but more importantly, the pattern remains the same as the money pattern. It reveals that the permanent effects cannot explain the variation of capital expenditure.

This irregularity seems to be in disagreement with the literature of economic development which suggests that in the early stages of development the public capital formation is of particular importance. This argument is based on the existence of a high marginal capital-output ratio due to the lack of adequate infra-structural investment in communication, electrification, transportation and so on. Based on the above argument Williamson suggested that, "... in capital goods expenditure at least, this would imply high government expenditure share in low income and developing nations relative to the middle-wealthy income groups who have already made that "lump" investment and whose marginal public capital outlay concomitant with output growth is much less."¹⁸ Another example of the regularity of public capital expenditure can be deduced from Musgrave's work, "... it should be noted that the ratio of total (public plus private) capital formation to GNP tend to rise with economic development. This will counterebalance a possible tendency for a declining ratio of public to private and tend to maintain the ratio of public capital formation to GNP."¹⁹ Also, Horowitz has found some empirical support for the high rate of capital formation. "In the developing countries the high share of government expenditure in the GNP is explained by public investment in economic development and is one of the causes of an accelerated rate of growth."²⁰ This result would not be sufficient for the illustration of regularity of public investment. Since the study is based

on the cross-section data and does not show the growth of public expenditure in the context of economic development, the irregularity of the capital expenditure remains unexplained.

While there is no satisfactory theoretical reason to explain such irregularity during economic development, the irregularity of public capital expenditure is not uncommon in matured economies. To analyse the irregularity of the capital expenditure Wiseman and Peacock suggested two reasons. "By definition, capital expenditures create durable assets, and such expenditures must, therefore, tend to occur irregularly. Also, the well known phenomenon of "bunched investment" can affect public as well as private investment,...."²¹ It is doubtful that these reasons can explain the irregularity of capital expenditure in a developing country. First, the nature of durable assets, in this respect, will be important only if the replacement investment is taken into account. Since in a developing country the capacity for new investment is far larger than in developed countries, the irregularity of capital expenditure cannot be attributed to the non-existence of the replacement investment due to the nature of the durable assets.

Secondly, the "bunched investment" arises from the anti-business cycle policy of the government in matured economies. Peacock and Wiseman have observed on their study of the British economy, the "growing pressure for capital spending in time of unemployment."²² Since the occurrence of the business cycle is less important and the nature of unemployment is different in developing countries, the "bunchiness" of investment may not be a consequence of stabilisation policy. In this respect, we should consider that the role of fiscal policy in a developing country is to be regarded as an economic policy for development. The major task of the development plans in a contemporary capitalist country is to ensure a high capital formation and maintenance of rapid economic growth. Therefore, it may be argued that

the "bunchiness" of investment may arise from the uneven distribution of projects in a period of the development plan which may create irregularity of the capital expenditure. But, figure (2-10) shows that the variation of capital spending during each plan is narrower than between development plans. The Third Plan shows a rapid growth of capital expenditure ratio (1962-68) while the Second Plan verifies a declining trend (1959-62) and the Fourth Plan illustrates a downward tendency (1968-73). This pattern may suggest that there must be a factor which affects the government's decision making with regard to its overall expenditure and its distribution between current and capital expenditure rather than the nature of durable assets and the "bunched investment".

As has been explained, the fluctuation of government expenditure at aggregate level are determined by the exogenous factor mainly oil revenue or, broadly, foreign exchange earnings. Therefore, one may attribute the fluctuations of capital expenditure to such determinants which are also affected by the political factor with regard to the distribution of government spendings between current and capital expenditures. Taking the foreign exchange earnings ratio as an index for revenue constraint (figures 2-8 and 2-10), it shows a similar pattern to that of government capital expenditure for the period 1959-70, verifying a downward trend for 1959-62, a rapid rate of growth for 1963-67 and a downward tendency for 1967-70. Whereas this pattern of foreign exchange earnings ratio can explain the variation of the capital expenditure for 1959-63 and 1963-70, the downward trend of capital expenditure during 1970-73 cannot be explained by the rapid growth of the foreign exchange ratio. However, the expected foreign exchange earnings has affected the Fourth Plan which can obviously be seen from the fear of the planners in the projection of the Fourth Plan (1968-73): " By the beginning of its last year (of the Third Plan), Iran has become increasingly sure that unless its oil revenue became even greater and the exports other than

oil and traditional farm products were successfully promoted, the country would face serious deficits in its trade balance. The Fourth Development Plan (1968-73) stipulated that its objectives could be met only if oil offtake increased at an average annual rate of approximately 16.8 per cent."²³

Despite the growth of oil production, it seems the foreign exchange constraint has remained as the major limiting factor of government capital expenditure. In this respect, two more factors seem to be influential; first, government development policy; second, the allocation of government revenue into consumption and capital formation. In 1970, in order to bring about higher participation by the private sector, a new government policy was announced. This called for basic changes, such as limiting the expansion of the existing public enterprises to their specialized fields and cutting off new government investment during the Fourth Development Plan.²⁴

As far as the second factor is concerned, the allocation of government revenue into consumption and capital formation is subjected to the political factor and the budget line. Since the sequence of allocation of revenue to expenditures runs from the current to the development expenditure, the budget line will discriminate against capital expenditure. In other words, current expenditure is financed through the tax and part of oil revenue while the development plan receives the rest of the oil revenue and possible deficit financing (foreign and domestic loans, see chapter 7 for the importance of deficit financing in Iran). Therefore, whenever foreign exchange earnings are restrained or fear of inflation exists, the first thing to be cut off is that part of expenditure which is financed through deficit financing which directly affect capital expenditure. However, the rising in importance of current expenditure, as has been explained, is largely determined politically. In this respect, the rising of defence expenditure can mostly affect public capital expenditure rather than other

components of current expenditure which have their own priority.

Distinguishing between different factors affecting capital expenditure does not mean they are mutually exclusive. The government development policy implies the preference between consumption and capital formation as well as the foreign exchange constraint. But, if we take the foreign exchange constraint as an external factor, the government's economic policy would be subjected to the foreign exchange constraint rather than vice versa. So, ultimately, the sequence of decision will be affected by the foreign exchange constraint as well as different determinants of the government current expenditure. As far as the latter is concerned, the determinants of current expenditure would also determine the scope of public capital expenditure. While some of the functional types of government expenditure are subjected to economic factors, some others have socio-political determinants.

For a further examination of the expenditure determinants, we would carry on with an analysis of the functional type of government expenditure for 1964-76. This analysis would make clear how the socio-political factors change the relative share of the different functional expenditures of the total under revenue constraint.

2-2-2 Government Expenditure By Function

Government expenditure has been disaggregated by function as follows:

- 1- Economic Services- This covers public expenditure in the agricultural, industrial and mining sectors as well as infrastructural expenditure.
- 2- Social Services- This includes education, health and social welfare expenditure.
- 3- Defence Services- This category covers only the expenditure of the Ministry of War.
- 4- General Services- This shows the internal security expenditure as well as the administrative expenditures. For the last five years the state construc-

tion expenditure is included.

5- Debt Repayment and Miscellaneous Expenditure- This includes interest, commission and other expenditure on loans, and the repayments of foreign and internal debts.

Economic Services

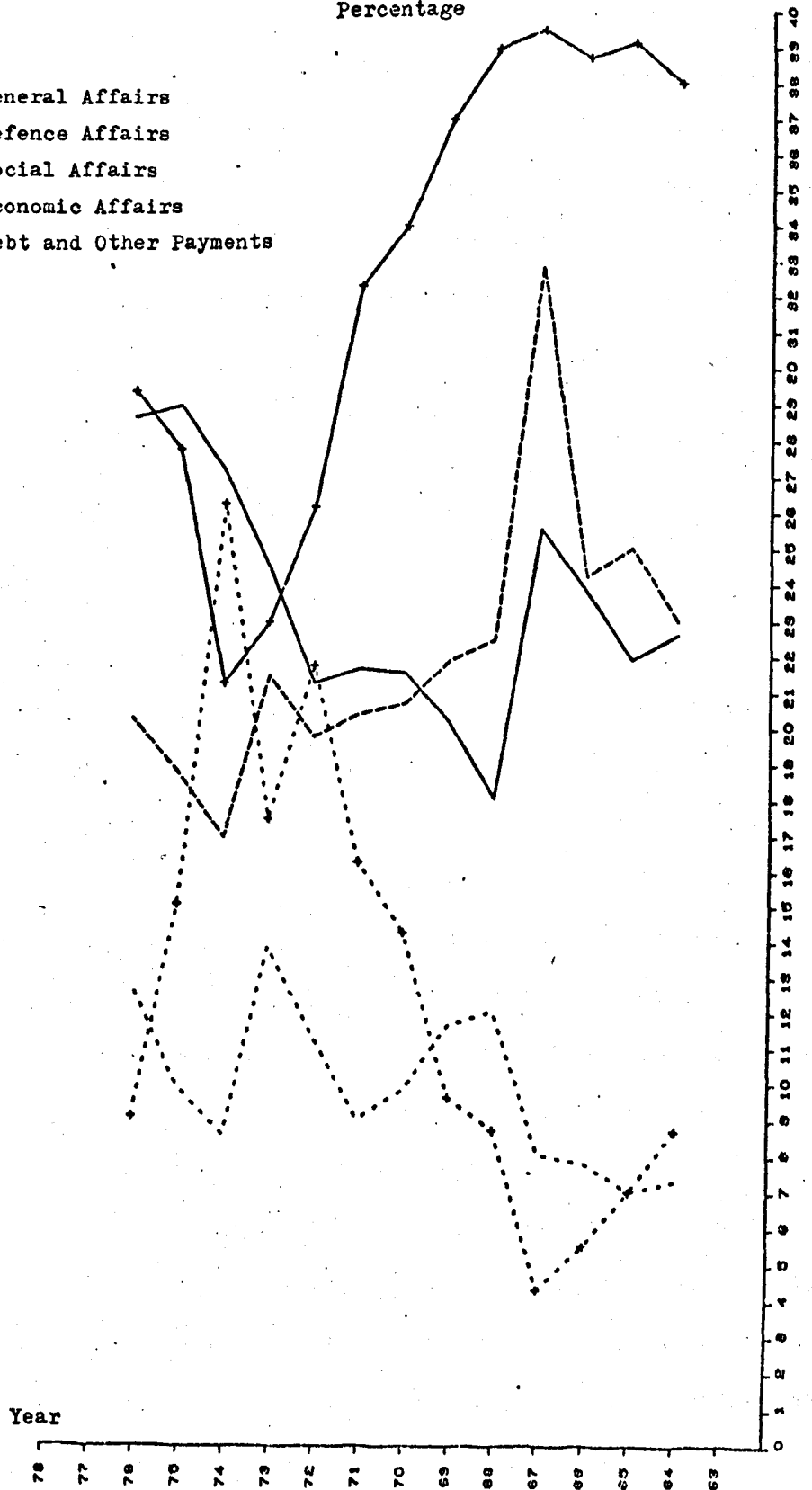
Following on from the previous section (see P 51), it is expected that during a period of socio-political stability, economic services would gain an important share of public expenditure, at least, in the early stages of development. The basic socio-economic changes during 1962-64 called for a rapid growth in economic services in later years. In this respect, the land reform of 1962 and the beginning of the economic recovery after the recession of 1961-3 combined with the growing socio-political stability, due to the strengthening of a dominant political group in the ruling class, brought about the necessary conditions for a higher public economic expenditure. Therefore, it is not surprising to find that Iran allocated about 40 percent of its government expenditure to the economic services during 1964-68 (figure 2-11).

However, since the economic services are largely financed through the development budget (about 80 to 85 percent of the economic services is in the form of capital expenditure), its share in the government spending is subjected to the above mentioned factors(e.i. foreign exchange constraint and the priority of current expenditure) particularly those determined by the socio-political factors. Since a large part of the economic services are financed through deficit financing(foreign and domestic loans), with the growing of government debt and the pressure of the foreign exchange constraint, the share of economic services declined rapidly from 39.4 percent in 1967 to almost 21.5 percent in 1974 (figure 2-11). Also, it is not accidental that the share of economic services and debt repayments have moved in the opposite direction. Increasing debt repayments have been

Figure (2-11)
Government Expenditure By Function
Percentage

79
Percentage

- General Affairs
- Defence Affairs
- Social Affairs
- * * * * * Economic Affairs
- *---*---* Debt and Other Payments



Source: Back Ground Table 9

allocated from the development budget which has affected the economic services.

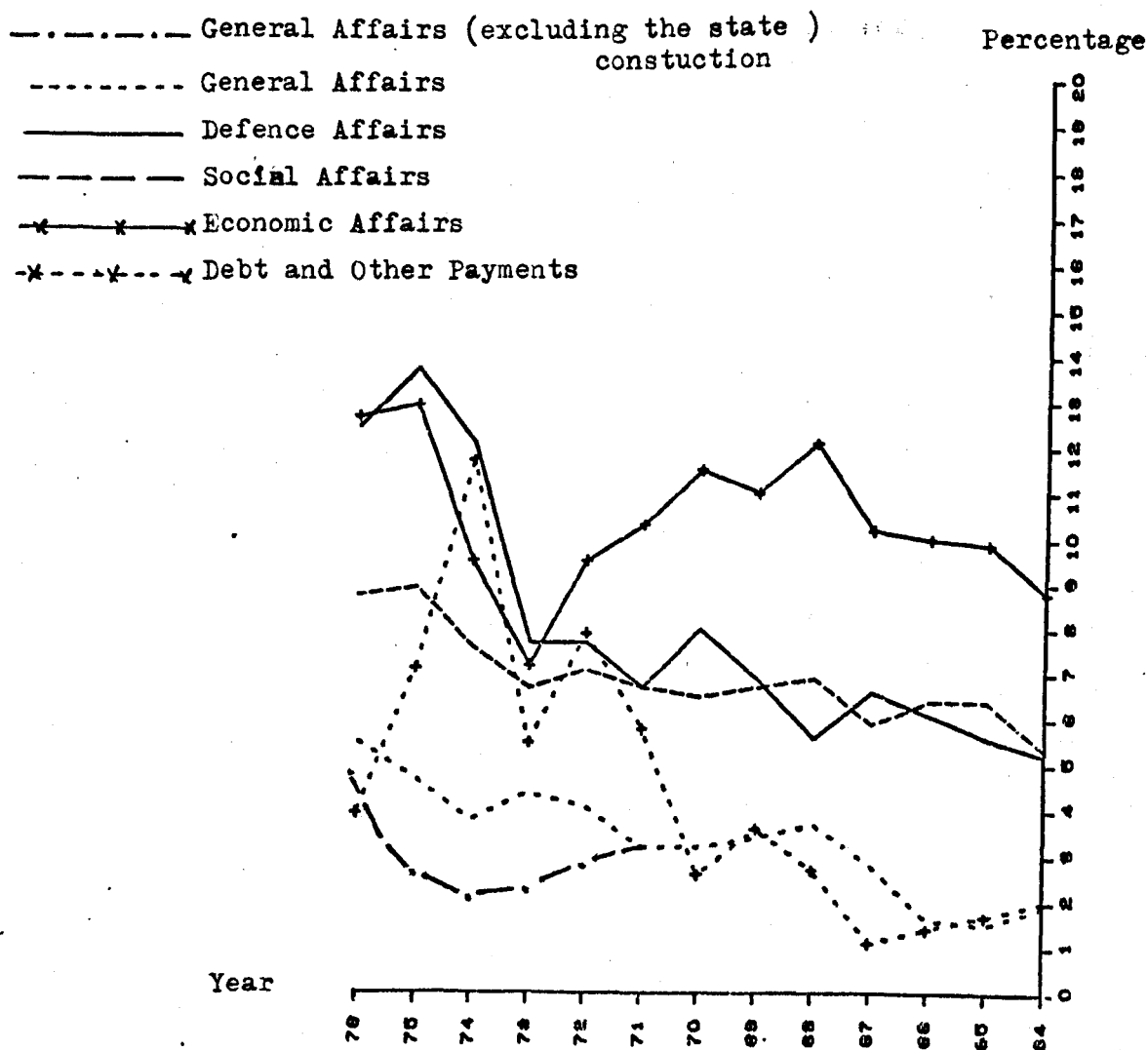
The decreasing trend of the share of economic services in the total government expenditure was so rapid that it could not keep step with the growth of the national income despite the rapid growth of government expenditure at the aggregate level. As figure (2-12) shows the ratio of expenditure on economic services to GNP declined from 12.1 percent in 1968 to 7.2 percent in 1973. The rising of this ratio during 1973-76 was due to the rapid growth of government revenue and expenditure at the aggregate level, the relaxation of revenue and foreign exchange constraint and thereby the increase in the share of economic services in total government expenditure.

Social services

A As has been explained the permanent effects such as the growth of population as well as the degree of urbanization would call for an increase in the social services. In this respect, education expenditure is affected by the population growth and so one may expect that the social services should grow up, at least, at a higher rate than the growth of population, particularly if the pattern of population is taken into account (see P60). With respect to the other factors we would expect that the social service increases would be almost as fast as the growth of national income.

However, in case of Iran, the ratio of expenditure on social services to GNP shows an upward tendency with sluggish growth rates for 1964-76. The growth rates have not been steady but the fluctuation has been narrow. As figure (2-12) shows this ratio has fluctuated between 5.3 to 8.5 percent with an upward tendency. Although the rates of growth of government expenditure on social services have been above than those of GNP, this group has been losing its share in the total government expenditure which indicates the low priority of this category of expenditure relative to general and

Figure (2-12)
Government Expenditure By Function
Ratio Relative to GNP



Source: Back Ground Tables 7 and 9

defence services (figure 2-11).

As far as the composition of social services is concerned, education and health expenditure shows a decreasing share. However, the education services account for the largest share in this category, accounting for 44 percent on the average. "other expenditures", including urban development expenditure, social welfare and insurance expenditure has grown relative to education and health services. The respective figures for 1969 and 1972-76 show an increase of 8 percent in the latter figures for the total social services over the former (table 2-8). This was largely due to social pressure in urban areas as a consequence of the rising of degree of urbanization.

When we take a composition of social and economic services as "development expenditure", it shows a downward trend from about 18 percent of GNP in 1968 to 13.8 percent in 1973. A similar but a magnified pattern can be seen if the share of "development expenditure" in the total government expenditure is considered. This share declined from 65 percent in 1967 to 38.5 percent in 1973; although it rose up to 49 percent, it remained well below the 1967 level. This pattern of expenditure clearly shows that the 1967-73 revenue and foreign exchange constraint discriminated against "development expenditure" and was affected by the political determinant of government expenditure with regard to the increase in defence expenditure (figures 2-11 and 2-13).

Defence Services

While in the pre-war period and during 1940's and 1950's the national defence force was used in cooperation with the internal security forces to overcome the internal problem of sovereignty and to reinforce the authority of the central government, it seems that by the early 1960's, Iran had become involved in regional and international conflicts and by mid 1969 with growing socio-political stability its involvement became greater.

Composition of Social Services

Table (2-8)

Billion Rials

Service	1969	1972	1973	1974	1975	1976
Education (%)	22.0 (47.0)	39.7 (47.0)	53.0 (44.8)	90.3 (38.9)	125.1 (40.6)	174.7 (43.7)
Health (%)	9.9 (21.0)	13.6 (16.0)	18.2 (15.4)	39.7 (17.1)	51.2 (16.6)	62.3 (15.6)
Other (%)	14.6 (32.0)	13.5 (37.0)	47.0 (39.8)	102.3 (44.0)	131.9 (42.8)	163.1 (40.7)
Total (%)	46.5 (100.0)	84.6 (100.0)	118.2 (100.0)	232.3 (100.0)	308.2 (100.0)	400.1 (100.0)

Source: Budget Acts 1970-77.

Composition of General¹ Services

Table (2-9)

Billion Rials

Service	1969	1972	1973	1974	1975	1976
Internal Security (%)	10.4 (43.5)	15.4 (46.4)	17.5 (39.4)	19.2 (40.2)	39.3 (41.4)	53.7 (41.3)
Others (%)	13.4 (66.5)	17.8 (53.6)	61.9 (60.6)	43.4 (59.8)	55.7 (58.6)	76.3 (58.7)
Total (%)	23.8 (100.0)	33.2 (100.0)	44.4 (100.0)	72.6 (100.0)	95.0 (100.0)	130.0 (100.0)

Note: 1- Excluding the state construction.

Source: Budget Acts 1970-73

Figure (2-13)

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Development and Non-development Government
Expenditures (Ratio to GNP)

Percentage

———— Development Expenditures
 Non-development Expenditures
 - - - - - Debt and Other Payments



Source: Back Ground Tables 7 and 9

The strategic situation of Iran i.e. being on the doorstep of a communist country seems to be of great concern and vital to the capitalist world. Withdrawal of English troops from the Persian Gulf by 1969 and the Nixon Doctrine which required a greater military participation and responsibility from its allied forces, called for higher defence expenditure in Iran. In this respect, the position of Iran as the largest country in the Persian Gulf imposes on the economy, the heavy burden of the protection of the interest of the capitalist world. Also, most important of all was the willingness of the ruling class to undertake such responsibility. As far as the regional problem is concerned, the aggravation of diplomatic relations between Iran and Iraq caused a serious threat to Iran during the late 1960's and early 70's.²⁵

Therefore, it is not surprising to find that the defence expenditure ratio to GNP has grown up from 5.2 percent in 1964 to 14 percent in 1975. The largest increase came about during 1973-4 which was around 4.8 percent relative to the previous year (figure 2-12). A similar rising trend can be seen in the share of defence expenditure in the budget. Its share steadily and rapidly moved up from 18 percent in 1967 to 29 percent in 1975 (figure 2-11). However, it seems that defence expenditure would show a higher percentage if hidden military expenditure is taken into account. This expenditure is mainly for the construction of military bases and has come under the general services. To avoid distortion a composition of defence and general expenditure has been used as "non-development" expenditure. Figure (2-13) shows a steady growth from 7.1 percent of GNP in 1964 to 19 percent in 1975.

General Services

• As has been explained (see P 17), there is no satisfactory theoretical explanation for the behaviour of general services during economic development. Depending on the relative expansion of the state bureaucracy and the

rising of productivity in the public sector, the ratio of general service expenditure to GNP may fluctuate during economic development. However, it may be reasonable to assume that after the state bureaucracy is sufficiently expanded, at least for a short period, the ratio to GNP will not rise at a significant rate due to the rising of productivity. Figure (2-12) shows an upward tendency since 1971. But this was due to the state construction figures which had before been excluded²⁶. When this distortion is avoided, the ratio of the general service expenditure to GNP illustrates a downward trend from 3.6 percent in 1968 to 2.6 percent in 1974 which returned to 4 percent by 1976.

However, as far as the general services component is concerned, the internal security forces gained the largest share i.e. about 42 percent on average. Although with complexity of the relations in urban areas and with the resulting social pressure, an increase in the internal security expenditure would be expected, its share of total general expenditure does not show any clear tendency, verifying a fluctuation of between 39.4 to 46.4 percent (table 2-9).

Finally, this category may not reflect the foreign exchange constraint since most of the payments are in the local currency. Therefore, as long as the control of the money supply is not concerned with fiscal policy, the reflection of foreign exchange or revenue constraint cannot be expected in the general affairs expenditure.

Debt Repayment and Miscellaneous Expenditure

To bridge the large gap in the Third Plan, the government resorted to the utilization of internal and external loans. This accumulated debt resulted in the rapid growth of repayment from 1968 as verified in figure (2-11). It shows a rapid growth of repayment from 1.1 percent of the GNP in 1969 to 7.9 percent in 1972. The rising of oil revenue during 1973-4 allowed the government to accelerate its debt repayment. The share of this

group in the GNP rose to 12 percent. This reduced the debt repayment in the later years and the share declined to 3.8 percent.

However, the break-down figures show that internal loans have enjoyed a rapid growth relative to foreign loans. On average its share in total reached about 30 percent. The utilization of the banking system as well as the foreign loans has resulted in a large debt interest. It accounts for more than 55 percent of the total (table 2-10). As far as the expenditure in Rial terms is concerned, this pattern illustrates a conformity with the experience of the 1950's which shows the negligence of the government in using fiscal policy as an instrument for mobilizing financial resources.

To the extent that the pattern is related to foreign exchange constraint, the effect is reflected in the repayment of foreign loans. As shown in table (2-10) the foreign loan repayment in absolute terms has developed, but the growth is not significant except for 1974. On average, the share of foreign loan repayments is about 20 percent. This pattern of growth implies that the debt repayment is elastic relative to the foreign exchange earnings.

Debt Repayment and Miscellaneous

Table (2-10)

Billion Rls.

	1968	1969	1972	1973	1974	1975	1976
Miscellaneous Obligations %	11.3 (69.0)	15.9 (64.9)	34.8 (32.2)	42.6 (54.4)	87.0 (47.0)	84.1 (67.7)	127.8 (66.9)
Internal Loan %		3.2 (13.1)	43.6 (46.6)	35.8 (37.7)	37.2 (20.1)	20.0 (16.1)	20.8 (11.6)
Foreign Loan %	5.1 (31.0)	5.5 (22.4)	15.1 (16.2)	17.6 (18.3)	60.8 (32.9)	20.1 (16.2)	20.6 (11.5)
Total %	16.4 (100.0)	24.6 (100.0)	93.5 (100.0)	96.0 (100.0)	185.2 (100.0)	124.1 (100.0)	179.2 (100.0)

Source: Budget Acts 1971-77.

State Construction

Table (2-11)

Billion Rls.

	1972	1973	1974	1975	1976
Governmental Buildings %	1.4 (10.7)	1.4 (4.4)	3.4 (7.5)	2.2 (3.2)	3.3 (4.9)
Military Buildings %	0.5 (3.5)	0.7 (2.2)	1.8 (4.0)	3.0 (4.4)	2.3 (3.4)
Other State Buildings %	11.2 (85.5)	29.5 (93.4)	40.3 (88.5)	63.2 (92.4)	61.3 (91.6)
Total %	13.1 (100.0)	31.6 (100.0)	45.5 (100.0)	68.4 (100.0)	66.9 (100.0)

Source: BMI, Annual Report, 1972-76.

Conclusion

It can be said that the government expenditure showed its 'normal' pattern during 1963-68 when the capital and current expenditure showed their normal pattern of growth. However, government expenditure has always been affected by a revenue constraint which by 1970 emerged as an obstacle to the normal pattern of public expenditure. In this respect, the seriousness of the revenue constraint has been alleviated by the external shocks which the economy had received from an exogenous factor that is oil revenue. During 1971-74 the increase in the power of bargaining against the oil consortium due to the political changes and the change in the structure of the oil market, resulted in the growth of oil production and changes in oil prices, and was the main cause of the displacement effect. In 1974, after a period of disturbances, government expenditure reached a new level. However, due to the nature of the cause, these effects may disappear from the Iranian economy in a short period of time. This is so because the shocks have remained exogenous to the Iranian fiscal system and have not improved the income elasticity of tax system.

As far as the impact of the revenue constraint on the components of government expenditure is concerned, it seems the economic services are the first to be affected; partially because they largely contain capital expenditure which is elastic in relation to foreign exchange earnings, and partially because the economic determinants are overshadowed by the socio-political determinants, due to the political structure of the society. The distribution of government expenditure has been such as to ensure the perpetuation of the status quo. What has determined the allocation of government expenditure to different functions is the commitment of the state to its Western Allies and its commitment to the domestic social forces to ensure political stabi-

lity. On the one hand, it has had to balance these two factors, while on the other hand, it has had to ensure its domestic social base or even to create such a base by elaborating on its economic policies within the country. However, the increase in oil revenue has gradually changed the sequence of causes and effects and has made the economy as a whole gear to the government expenditure whose level has been exogenously determined. This has granted the state more autonomy in determining its policy and has given the external factor more weight. This particularly has been noticeable since the mid 1960's when the stability of the Persian Gulf has been undertaken by the Iranian government which also means a higher commitment of the Iranian government to its Western Allies. A higher share of government expenditure has gone to the expansion of the army to fulfill such commitment. The expansion of the army, has on the one hand, reduced the share of domestic social forces from the government expenditure and, on the other hand, the role of the army as a determinant factor in the domestic politics has increased which in turn has reinforced the above process and meant a lower reliance of the state on other political forces. In other words, the change in the balance between external and internal factors has affected the trade-off point among different government expenditures within the Iranian economy and under the revenue constraint. While up to 1966-67, the trade-off point was more or less a reflection of the relative importance of domestic social forces and the state had tried to gain the support of urban dwellers and particularly the urban middle and upper classes, since then, with the expansion of the army, the room for attraction of such support has become narrower and the trade-off point has been affected by the weight of the army in the political hierarchy.

Analysis of government expenditure shows that the share of public activities has been increasing and reached 42.3 percent of GNP in 1975. If

we take the government commercial agencies and the government profit-making enterprises into account, the share of public expenditure will reach an astronomical figure, i.e. about 65 percent of the GNP. With such a large share we expect a great impact on employment, production and investment. This rapid growth of government expenditure during the 18 years of this study should also be accompanied by rapid changes with regard to income distribution. The evaluation of these effects is the object of this study. Although the analysis of government expenditure has indicated that the pattern has been greatly affected by socio-political factors, they have created economic effects which are subject to economic analysis.

Note

- 1 - Bharier, J. Economic Development in Iran 1900-1970, London, 1971, P.59 Figure (1).
- 2 - Plan Organization, Statistical Centre, Statistical Year Book 1967, P.726.
- 3 - Bharier, J., Op.cit., P. 48.
- 4 - See Williamson, Op.cit.; Martine and Lewis, Op.cit.; Lotz, Op.cit.; Pryor, Op.cit., P.232.
- 5 - Lotz, also, has recognized that "... not all forms of expenditure are equally affected by the availability of tax revenue. Spending on economic services (i.e., economic development expenditure), is often financed by foreign aid and may also be financed by domestic non-tax receipts to a greater extent than other form of expenditure." Lotz, J.R., Op.cit., P. 120.
- 6 - Lotz, J.R., Op.cit., P. 120. His study on the factor analysis shows that "... spending on defence and economic services is not clearly related to the stage of development."
- 7 - Lotz, J.R., Op.cit. P.133.
- 8 - Horowitz, D., Op.cit., P. 69.
- 9 - See Note 13.
- 10 - Plan Organization, Second Development Plan, Final Report, 1343(1964), PP.2-3.
- 11 - Ibid., P.7.
- 12 - Ibid., P.6.
- 13 - The percentage of defence expenditure in the total government expenditure moved up from 35 percent in 1951-52 to 40 percent in 1956-7. Bharier, J., Op.cit., PP.67-68.
- 14 - Plan Organization, Second Development Plan, Op.cit., P.7.
- 15 - Gandhi, V.P., Op.cit., PP. 50-3.
- 16 - Plan and Budget Organization, The Budget Act 2535 (1976-77): A Summary, PP.5-6.
- 17 - Ibid., PP.6-7.
- 18 - Williamson, J.G., Op.cit., P.46.
- 19 - Musgrave, R.A., Op.cit., P.78.
- 20 - Horowitz, D., Op.cit., P. 59.
- 21 - Peacock and Wiseman, Op.cit., P.77.
- 22 - Ibid., P. 77.
- 23 - Foreign Area Studies, Area Hand Book For Iran, Washington D.C., 1971, PP.535.
- 24 - Ibid., P. 538.
- 25 - Ramazani, R.K., Iran and the United States: An Experience of Enduring Friendship, The Middle East Journal, Summer 1976.
- 26 - It seems that since 1971 some of military capital expenditure has come under General Services. This expenditure consists of the state construction. Although the break-down figures in table (2-11) shows a military building (these figures are related to the security forces' expenditures), it seems the figure related to 'other state' building can be the hidden military expenditure for military bases. More importantly, this item accounts for 90 percent (on average) of the total construction and about 30 percent of the General Services. In this respect, see also, Robert Graham's view, Financial Times, June 21, 1976, P.20.

Part Two

Effects of Government Expenditure On Economic Development of Iran

Introduction

In the previous part we have evaluated the determinants of government expenditures and the factors responsible for disbursement of public spending to the functional duties of the central government and with regard to public current and capital expenditure. Ultimately, the direction and the type of government expenditure along with other government economic policies, produce important effects on the economic performance of the country, evaluation of which is the main purpose of the three following chapters. We will examine these effects from several points of view, in the main, output, capital formation, employment as well as the degree of market integration and distribution of income. Before we discuss the effects of government policies and the allocation of public expenditure on the performance of the main economic sectors (agriculture, industry and services) in detail, it is necessary to look at the economic performance of the country at an aggregate level with regard to output, capital formation and employment.

Change in the Pattern of Output

The growth rate of gross domestic product (GDP) at current prices has been rapid during the 1959-76 period. The growth rate ranged between 6.5 percent for 1959-61 to 60.6 percent in 1972-74. The rapid growth for 1972 to 1974 was largely due to the increase in oil prices and was to some extent affected by inflationary pressure existing in other sectors. Despite the continuing inflationary pressure, the relative stability of oil prices and the negative growth rate of oil production, the growth rate of GDP at current prices declined to 22.1 percent during 1974-76. This can clearly be seen from the difference in

Annual Rates of Growth of GDPand Its Components

Table(II-1)

At Current Prices

Percentage

Year	Agriculture	Oil	Industry	Services	GDP including Oil	GDP excluding Oil
1959-61	4.2	10.3	8.3	6.5	6.5	6.1
1962-66	5.9	12.2	13.2	10.7	10.0	9.7
1966-70	7.2	23.3	15.2	12.7	12.1	10.2
1970-72	12.1	37.0	21.3	23.1	26.1	23.5
1972-74	22.6	134.0	32.9	36.5	60.6	32.6
1974-76	19.1	9.9	23.0	28.5	22.1	32.0
1959-70	5.8	15.3	12.3	10.0	9.5	8.7
1970-76	17.9	60.3	25.7	29.4	36.3	29.4

Source: Back Ground Table 10

Annual Rates of Growth of GDPand Its Component

Table (II-2)

At Constant Prices

Percentage

Year	Agriculture	Oil	Industry	Services	GDP Including Oil	GDP excluding Oil
1959-61	1.4	12.7	8.0	2.9	4.4	3.4
1962-66	3.8	14.4	12.3	9.6	9.2	8.4
1966-70	5.8	15.3	11.9	11.6	11.0	10.2
1970-72	0.8	10.9	15.0	19.0	13.3	13.9
1972-74	5.8	5.6	19.1	18.9	14.8	16.6
1974-76	6.6	-0.02	22.3	14.1	13.2	15.4
1959-70	3.8	14.3	11.1	8.6	8.7	7.7
1970-76	4.4	5.4	18.8	17.3	13.8	15.3

Source: Back Ground Table 11

the rate of growth of GDP with and without the oil sector. The growth rate is higher in the case of the latter than that of the former. However, a large percentage of the growth since 1970 can be attributed to the rapid increase in the oil prices and its inflationary impact(table II-1).

When the growth rate at constant prices is considered, although the rates are fairly rapid, they are far lower than those at current prices. The annual growth rate of GDP at constant prices moved up from 4.4 percent during 1959-61 to 11.0 percent in 1966 and has since remained stable around 13.5 percent (table II-2).

The contribution of different economic sectors in the GDP growth rate has changed during the period under study. This contribution depends on the share of each sector in the GDP and its rate of growth. In order to illustrate the share of contribution of each sector, the weighted rates of growth at constant prices have been considered. As table (II-3) shows the agricultural sector was able to stabilize its share of growth during 1959-70 at around 10 percent. This was largely due to its relatively dominant share in GDP which allowed this sector to keep its contribution in the growth share, despite its relatively low rate of growth. During the same period, the service and oil sectors accounted for 37.0 and 26.4 percent of growth share respectively. The industrial sector accounted for 26.4 percent of growth share on average. But, clearly a decreasing trend can be seen for this sector of the economy. Its contribution declined from 31.8 percent in 1959-61 to 25.4 percent during 1966-70 which indicates that the changes in the relative growth rate of output in this sector were lower than those of other sectors. The above pattern shows that the oil and service sectors were the main contributors in the growth of the Iranian economy during 1959-70. However, since 1970, shares of agricultural and oil sectors in the growth in real terms have declined to 4.3 and 7.2 percent respectively (during 1970-6) while those of industrial and service sectors have risen to 32.6 and 55.9 percent respectively.

Share of Growth of Economic Sectors

In GDP (Weighted Growth) ¹

At Constant Prices

Table (II-3)

Percentage

Year	Agriculture	Oil	Industry & Mining	Services	GDP including Oil
1959-61	0.4 (9.1)	1.4 (31.8)	1.4 (31.8)	1.2 (27.3)	4.4 (100.0)
1962-66	1.0 (10.7)	2.1 (22.6)	2.5 (26.9)	3.7 (39.8)	9.3 (100.0)
1966-70	1.2 (10.9)	2.5 (22.7)	2.8 (25.4)	4.5 (40.9)	11.0 (100.0)
1970-72	0.1 (0.7)	2.0 (15.1)	3.5 (26.3)	7.7 (57.9)	13.3 (100.0)
1972-74	0.8 (5.6)	0.9 (6.2)	4.4 (29.8)	8.7 (60.4)	14.8 (100.0)
1974-76	0.8 (6.1)	-0.02 (-0.1)	5.6 (42.5)	6.8 (51.5)	13.2 (100.0)
1959-70	0.9 (10.3)	2.3 (26.4)	2.3 (26.4)	3.2 (36.9)	8.7 (100.0)
1970-76	0.6 (4.3)	1.0 (7.2)	4.5 (32.6)	7.7 (55.9)	13.8 (100.0)

Note: 1- Figures in () indicate the share of sectors in the growth of GDP.

Source: Back Ground Table 11

One important implication of the above pattern is that the oil sector which has been the motor of the economy may not be able to expand its production at a desirable rate to contribute in the growth of economy. The negative rate of growth of oil production during 1974-6 points at a disappearance of the oil sector as an important contributor in the growth of the economy (see chapter 8). Therefore, in the evaluation of the performance of the Iranian economy, the GDP without oil sector may be a more appropriate index than the GDP including oil. However, the oil revenue has affected the factor proportion and the relative importance of other sectors of the economy and its effects are so deep rooted that may not disappear from the pattern of development of the Iranian economy even in the medium run.

When the pattern of non-oil GDP is considered, there exists an obvious change: that is the declining share of the agricultural sector in the GDP from 35.8 percent in 1959 to 14 percent in 1976 (figure II-1). As will be explained in chapter 3, the bad performance of the agricultural sector depicts the structural problem of the Iranian economy. Although the decreasing trend of the share of the agricultural sector up to a certain stage of development in the process of economic development is expected¹, the decline in the case of Iran has been so rapid that it cannot be explained by the normal difference in the labour productivity in different sectors of the economy. However, to the extent which this decreasing share of agricultural sector is caused by the difference in the labour productivity, it can be attributed to the nature of economic development in capitalist system which leaves the discrepancies in labour productivity to be narrowed by the market forces in the long run. But, in the case of Iran, the process has also been affected by the government policies as well as the effect of oil revenue on the factor proportion. How these factors have affected the performance of the agricultural sector is the main concern of the chapter on agriculture (chapter 3).

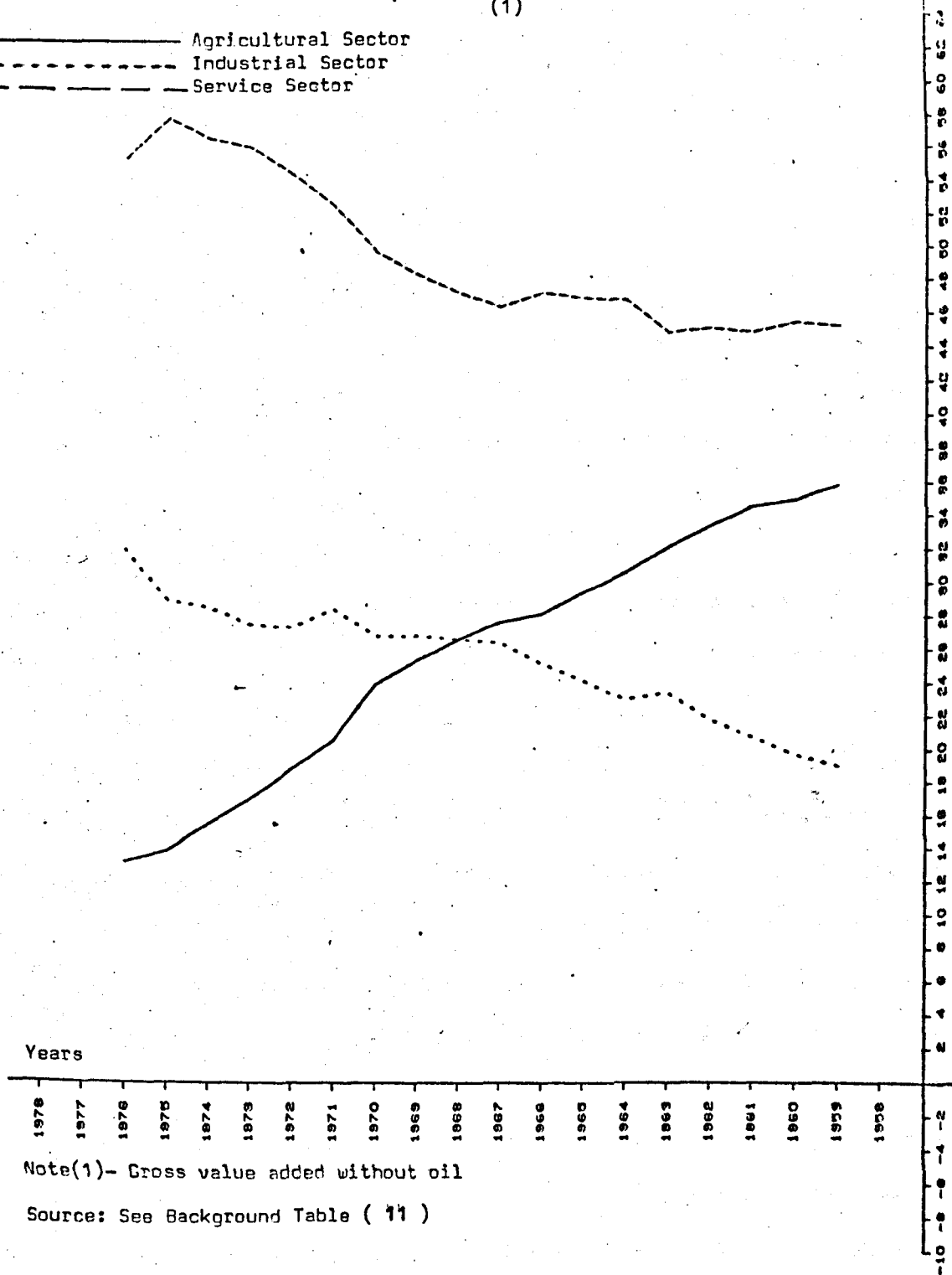
The industrial and service sectors have been able to continue their

Figure (II-1)
Gross Value Added at Constant Prices By Sector
(1959 Prices) (Percentage)
(1)

98

Percentage

— Agricultural Sector
- - - Industrial Sector
- - - Service Sector



Note(1)- Gross value added without oil

Source: See Background Table (11)

growth at a higher rate than the average. Consequently, their shares in the non-oil GDP at constant prices have risen from 19 and 45.2 percent in 1959 to 30.8 and 55.2 percent in 1976 (figure II-1). As far as the industrial sector is concerned, the growth rate has been fairly high (11.1 percent for 1959-70 and 17.3 percent for 1970-76, table II-2). However, as will be explained in chapter 4, the structure of the industrial sector which is characterized by low market integration and high dependency on the foreign sector has been vulnerable to the influence of oil revenue. Therefore, the disappearance of the oil revenue may also affect the growth and the pattern of industrial output. How the government economic policies, under the effect of oil revenue, have affected the pattern and the growth of industrial output and market integration will be discussed in chapters 4 and 8.

One of the most important features of the pattern of economic development in Iran is very high share of the service sector relative to other productive sectors. The non-proportional growth of this sector does not necessarily reflect the higher productivity in the service activity. To a large extent, the growth of this sector can be attributed to the expansion of unproductive activity (such as land-speculation) and the rising of salaries in the public services (defence and top civil servants in particular). However, the expansion of the service sector has been brought about by the enormous growth of oil revenue during 1959-76 which has allowed unproductive activity and salaries to grow rapidly during this period. With the decreasing trend of oil production, the expansion of the service sector may come to a halt. Therefore, when the oil resources run out, the Iranian economy may lose its two important sectors, which have contributed the largest share of the growth of the economy, in the foreseeable future.

Pattern of Employment in Iran

The overall manpower situation during the period 1956-76 may be charac-

terized basically as one in which the supply of manpower out-stripped the demand for it. However, important changes can be seen in the growth of population and the pattern of employment.

While during the 1956-66 period the population of Iran expanded at a rate of 3.1 percent per annum, the rate declined to 2.7 percent during 1966-76 period (table II-4). Despite the high rate of growth in both periods, its impact on the Iranian labour market was less than is suggested by the above rates. As far as the first period is concerned, there are two basic reasons which affected the growth rate and the share of active population in the total population: First, the relatively higher growth rate of population in the age group below labour force age (i.e., under ten years). Second, the decline in the rate of labour force participation among persons aged ten and over, mainly, a higher number of students in the total population.

Due to the above factors, the rate of active population growth was around 2.06 percent during 1956-66 which is lower than the rate of population growth. Consequently, the share of labour force in the total population declined from 32 percent in 1956 to 28.0 percent in 1966 (table II-4).

In the second period (1966-76), despite a declining rate of population growth, the rate of growth of economically active population on average remained more or less unchanged, that is about 2.04 percent. This pattern implies that the impact of a high rate of population growth during 1956-66 has started to appear during 1966-76. However, as table (II-4) shows, up to 1973 the share of labour participation had been declining, which suggests that the impact of a high rate of population growth on the labour market began after 1973. By 1976, the share of economically active population reached 27.1 percent of the total (from 25.8 percent in 1973). This pattern suggests an increasing rate of labour force participation and a big increase in the supply of labour in the future.

Despite the existence of the easier conditions, that is, the declining

Distribution of Population By
Classification of Active, Unactive and Employed

Table (II-4)

('000) Persons

Year	Total Population	Active Population		
		Total	Employed	Unemployed
1956	18955	6067 (32.0)	5908 (31.2)	159 (2.6)
1966	25789	7445 (28.9)	6715 (26.0)	730 (9.8)
1971	28664	7826 (27.3)	7009 (24.4)	817 (11.7)
1973	31925	8228 (25.8)	7146 (22.4)	1082 (13.2)
1976	33592	9120 (27.1)	9023 (26.9)	97 (1.1)
Growth Rate 1956-66	3.1	2.06		
Growth Rate 1966-76	2.7	2.04		

Note: 1- Figures in () indicate the share of groups in the total population.

Source: Plan Organization, Statistical Centre of Iran, 1956(1335), 1966(1345) and 1976(2533) Population Censuses; Man-Power Sample Survey and BMI, Annual Reports 1973-76 .

of rate of population growth and the labour force participation, during 1955-76 the demand for labour did not match the supply of it and unemployment rose from 9.8 percent in 1966 to 13.2 percent of active labour force in 1973 (table II-4). The main reasons for the rise in the unemployment rate were the failure of government economic policies in expanding the service and industrial sectors as well as the wrong choice of technique in the manufacturing sector which did not create the job opportunities for the new comers in the labour market and those who left the agricultural sector for new jobs in towns and cities.

Up to 1966, the rapid development of basic industries, mainly textiles and food was the main cause for the change in the pattern of the employed labour force. The share of the agricultural sector declined from 56.3 percent in 1956 to 50.3 percent in 1966 while that of the industrial sector rose by 8 percent from 20.1 percent to 28.1 percent. During 1966-73, with the change in the pattern of development of the industrial sector, the impact of the expansion of this sector on the labour market was not in the form of higher demand for labour. As table (II-5) shows the level of the employed labour force (in absolute terms) in the industrial sector remained unchanged. Consequently, its share in the total employed labour force declined to 26.3 percent. Although the service sector was expanded to absorb a higher share of labour force, the combined effect of the industrial and service sectors was not sufficient to change the pattern of employment at a significant level (the share of the service sector rose from 21.6 percent in 1966 to 25.2 percent in 1973). Therefore, the agricultural sector remained as the main source of employment. Its share declined by only 1.8 percent during 1966-73 from 50.3 percent to 48.5 percent. However, the employment in the agricultural sector does not arise from a genuine demand for labour. But, largely, because this sector can keep the labour in the form of disguised unemployed and so the large share of employment in this sector also represents a high percentage of under-employment. So long as there exists migration from rural to urban areas, it

Sectoral Distribution of EmployedLabour Force ¹

Table (II-5)

('000) Persons

Year	Agriculture	Industry & Mining	Services	Total
1956	3326 (56.3)	1188 (20.1)	1394 (23.6)	5908 (100.0)
1966	3380 (50.3)	1887 (28.1)	1448 (21.6)	6715 (100.0)
1971	3437 (49.0)	1735 (24.8)	1838 (26.2)	7010 (100.0)
1973	3466 (48.5)	1879 (26.3)	1801 (25.2)	7146 (100.0)
1976	4195 (46.0)	2400 ² (26.3) ²	2525 (27.7)	9120 (100.0)

Note: 1- Figures in () indicate the share of sectors in total employed labour force.

2- Includes manufacturing and mines

Source: See Table (II-4)

can be attributed to the disguised unemployment in the agricultural sector (see below for migration in Iran). Therefore, a slower rate of change in the pattern of employed labour force during 1966-73 in comparison with the period 1956-66, should not be interpreted as an increase in demand for labour in the agricultural sector.

During 1973-76 when the economy received a shock through the rising of oil revenue, one would have expected a crack-down of the above pattern of employment along with the changes in the pattern of output. But, the primary data available does not suggest a significant change during this period. In the absence of data on the share of different sectors in the total employed labour force, we have to rely on the scattered data available and to use a proxy measure to explain the pattern of employment during 1973-76.

Table (II-5) shows that the share of the manufacturing and mining sector (excluding construction and public utilities) is around 26.3 percent, therefore, the share of industrial sector in the total employment should be higher than that of 1973. Since usually the BMI estimation of the employed labour force in the manufacturing sector is higher than that of the SCI estimation², the above share may be over stated relative to the previous years. Considering the above over-estimation, the 26.3 percent may represent the share of industrial sector as a whole rather than the share of the manufacturing and mining sectors alone. Even if the increasing share of the industrial sector in the total employed labour force had been accompanied by a significant change in the pattern of employment is not depicted in table (II-5). Assuming changes in the share of agricultural employment in the total employed labour force are also related to the change in the share of rural-urban population, one may be able to estimate the share of agricultural employment in 1976. As table (II-6) illustrates the share of rural population in the total has gradually declined from 59.3 percent in 1966 to 53.3 percent in 1976. Assuming a similar change in the share of agricultural employment (including under-employment),

the share may be estimated around 46 percent in 1976 which indicates that the agricultural sector is still the main source of employment (including under-employment). However, this pattern shows the changes in the permanent employment and it does not reflect the changes due to the temporary and seasonal migrations from rural to urban areas. Since a large share of demand for seasonal employment comes from the construction sector, therefore, the effects of 1973-4 increase in the oil revenue may have appeared in the form of temporary employment in the construction sector rather than creation of structural change in the pattern of employment. The reasons why the pattern of employment has not structurally changed along with the pattern of output should be sought in the problem of migrations from rural to urban areas as well as the government policies with regard to the development of agricultural, manufacturing and construction sectors (see the relevant chapters for the government policies).

However, since the expansion of service and industrial sectors during 1959-76, have benefited from the increase in oil revenue, with the decreasing importance of the oil sector in the Iranian economy, the pace of changes would slow down and the agricultural sector may be able to increase its relative share in production. Despite the fact that one may expect a brighter future for the Iranian agricultural sector, this sector may not be able to absorb the new comers in the labour market in the future. The main reason is the change in the structure of manpower in the Iranian economy.

The expansion of the service sector, in particular, education, has created a structural change in the pattern of the labour force, mainly, it has increased the share of educated manpower with a variety of qualifications who seek jobs in the industrial and service sectors. With this change in the pattern of manpower, the importance of the agricultural sector as a source of demand for new comers is bound to decline. Whether the structure of the manufacturing sector allows the demand for skilled manpower to grow fast enough to absorb the future supply of labour is our concerned in chapters 4 and 5.

Distribution of Population
By Rural and Urban Classification

Table (II-6)

percentage

Year	Rural	Urban
1956	70.4	29.6
1966	59.3	40.7
1971	57.8	42.2
1973	56.1	43.9
1976	53.3	46.7

Source: see Table (II-4)

Relative Sectoral Productivity ¹
At Constant Prices

Table (II-7)

Year	Agriculture	Industry & Mining	Services	Total
1956	0.67	0.91	1.79	1.00
1966	0.56	0.89	2.18	1.00
1971	0.43	1.12	1.95	1.00
1973	0.36	1.06	2.16	1.00
1976	0.30	1.15	2.01	1.00

Note: 1 - The Ratio indicate the ratio of the :

Share of Economic Sectors in GDP

Share of Economic Sectors in Total Employed Labour Force

Source: see Table (II-4.) and figure (II-1)

Whether the supply of education is sufficient and its type is appropriate to match the demand for and supply of skilled manpower in the labour market is also the concern of chapter 5. However, not only is it the Iranian economy which is facing a relatively new pattern of supply of manpower, but, also the pressure on the Iranian labour market is increasing, that is the share of active population has started to rise. This may be sufficient to cause the Iranian economy to face a serious unemployment problem.

Comparing the pattern of output with that of employment, a clear critical divergence between these two patterns can be seen in the Iranian economy. On one hand, while the agricultural sector has lost its share in the GDP, it has still remained over populated. On the other hand, the industrial and service sectors have rapidly raised their share in the GDP while their contribution in total employed labour force have remained relatively unchanged. Consequently, the gap between the relative productivity of these sectors has widened. As table (II-7) indicates the relative (real) productivity of the agricultural sector has rapidly declined from 0.67 in 1959 to 0.30 in 1976. In the same period, a rising tendency in the relative productivity of industrial and service sectors can be observed. Although the widening gap can be attributed to the capitalist path of development, as we will explain in chapter 3, the declining relative productivity of the agricultural sector has not only been in relative terms but it has also been in absolute terms. As will be explained, government policies have been the major factors in accelerating the above process.

The most important implication of the above pattern of development is the ever-worsening distribution of income and the widening gap between the rural and urban areas. This pattern of distribution has appeared to be not only an obstacle to the development of the manufacturing sector (chapter 4), but also to be the base for the whole economic and socio-political problems (see the general conclusion on all chapters and particularly the chapter on oil).

Pattern of Capital Formation

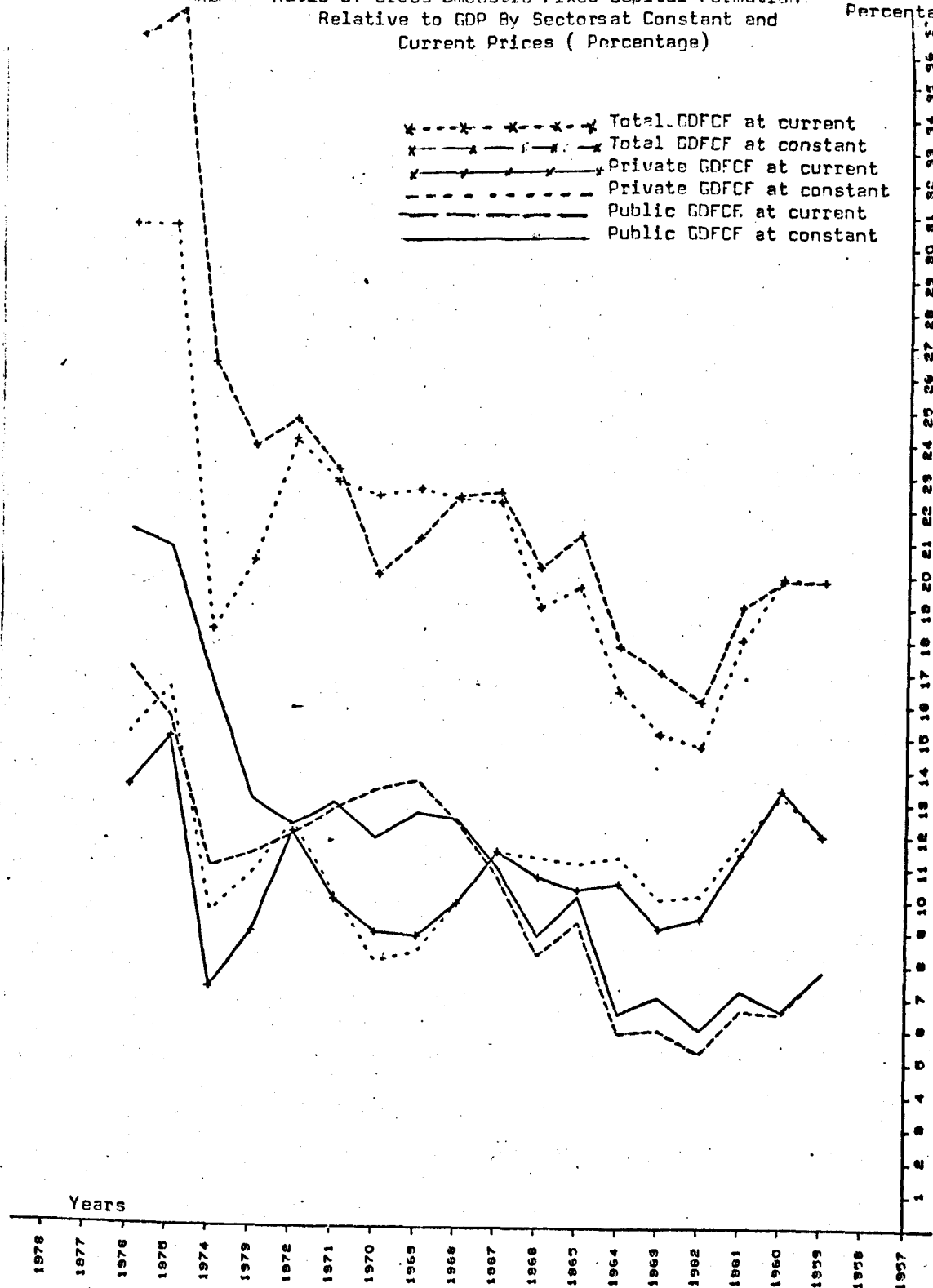
The pattern of capital formation in Iran is characterized by a slow but steady rise during 1960's and the rapid growth during the 1970's. As figure (II-2) shows the ratio of the gross domestic capital formation (GDCF) relative to the GDP, both at constant and current prices, has risen from 19.8 percent in 1959 to 36.4 percent in 1976 (at constant prices). The pattern of development of capital formation at constant and current prices illustrated a similarity which indicates that the effect of prices has not been in the form of a distortion in the pattern of development of capital formation. But the degree of fluctuation is somewhat different due to the difference in price changes for capital goods on one hand, and the consumer goods and service, on the other.

The up-ward trend of the GDCF ratio on the aggregate level is clear, but, in some cases, the fluctuation is plausible. As figure (II-2) shows the fluctuation has largely been caused by the irregularity of private investment. However, the fluctuation cannot merely be attributed to the cyclical nature of investment in the private sector. To a great extent, it has been affected by the government credit and investment policies. For instance, the declining trend of private investment during 1959-64 was the consequence of the recommended economic policies of the IMF in order to check the inflationary pressure, to reduce the balance of payments deficit and to bring the economic soundness to the country³. The policy recommended that the banking system could produce the necessary credit for the private sector provided the government paid back its debt. Since the government was not able to reduce its expenditure and still resorted to the central bank to make the necessary payments, the policy resulted in cutting off the credit to the private sector during this period⁴. In the same period, private investment was affected by the agrarian reform (see chapter 3 for the effect of the land reform on the capital formation in the agricultural sector during this period). Similarly, during 1967-70 when a

Figure (II-2)

Ratio of Gross Domestic Fixed Capital Formation
Relative to GDP By Sectors at Constant and
Current Prices (Percentage)

Percentage



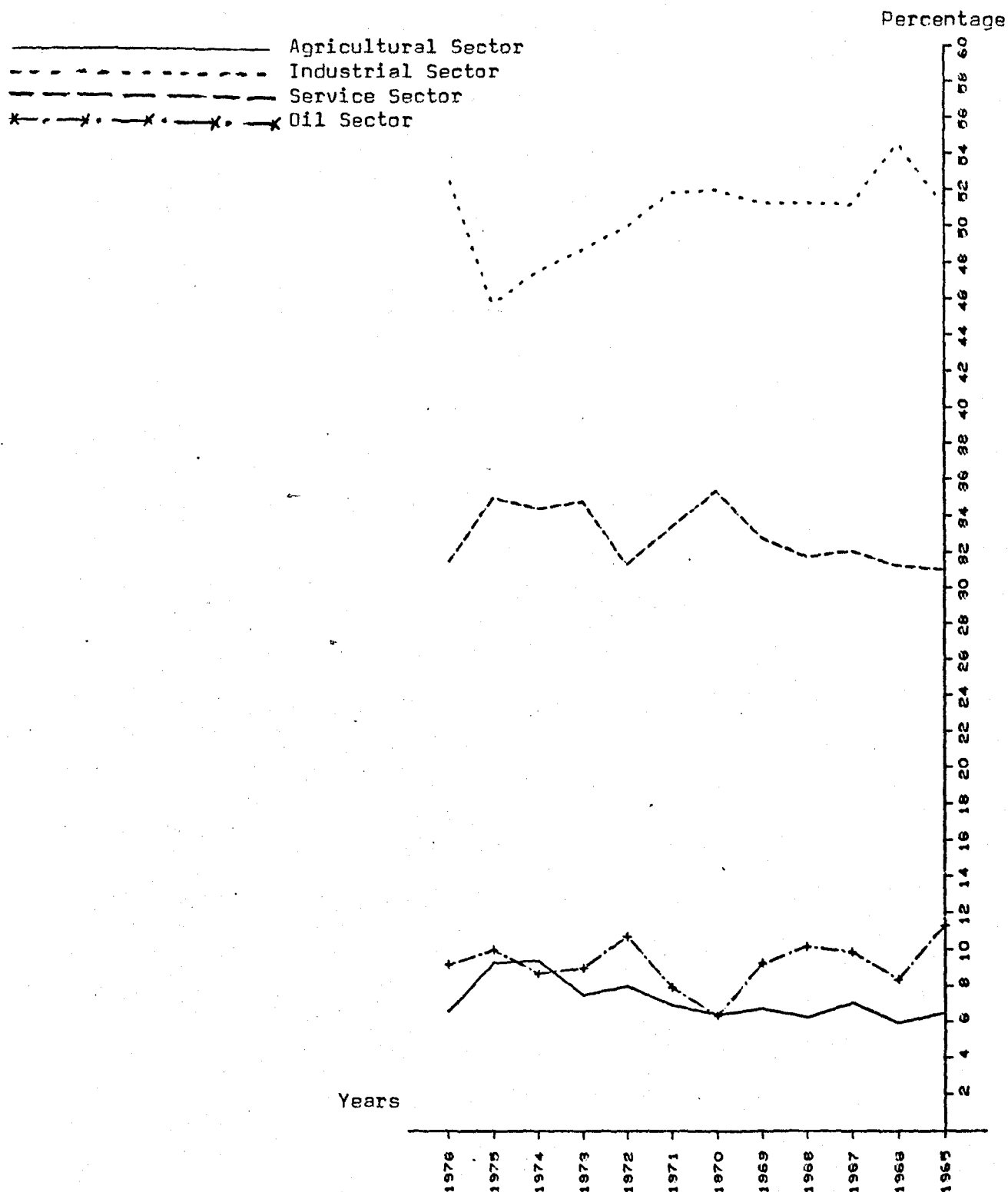
Source: See Background Tables 12 and 13

serious foreign exchange constraint started to appear, the government investment policy discriminated against private investment by giving public projects the first priority with regard to access to the foreign exchange earnings. The above examples show that whenever a trade-off existed between the public and private sectors with regard to the available scarce financial resources, it has discriminated against the private sector. However, to the extent that the fluctuation has been due to the irregularity of investment in the public sector, as has been explained (see part one), is affected by the irregularity of foreign exchange earnings, particularly, through the oil revenue. Despite the irregularity of public investment, the rising trend is clear and this is also responsible for the rising trend of GDCF on the aggregate level. As the consequence of the higher rate of growth of public investment, its share in the total GDCF rose from 32.8 percent in 1960 to 59.9 percent in 1974. With the above pattern of capital formation with regard to the responsible bodies, the change in the structure of capital formation can largely be attributed to the public investment and the priority given to the different sectors of the economy by the government.

The structure of capital formation shows that the industry and mining sector has the largest share of the capital formation. But, its share has been declining from 55 percent of the total in 1966 to 47 percent in 1975 (figure II-3). This sector consists of manufacturing and mining, housing, and public utilities. When the composition of capital formation in this sub-sector is considered, housing shows the largest share of the capital formation in 1966 (figure II-4). The declining trend of capital formation in the industrial sector has been due to the rapid decrease in investment in the housing sector. Its share declined to 18.2 percent of the total by 1975. From the two other components of the industry and mining sector, the public utilities have an stable share while the share of manufacturing sector has been rising from 11.3 percent in 1965 to 22.1 percent in 1976. As is shown in figure (II-4), the oppo-

Figure (II-3)

Ratio of GDFCF relative to GDP at Constant Prices
By Major Economic Sectors
(percentage)



Source : See Background Table (14)

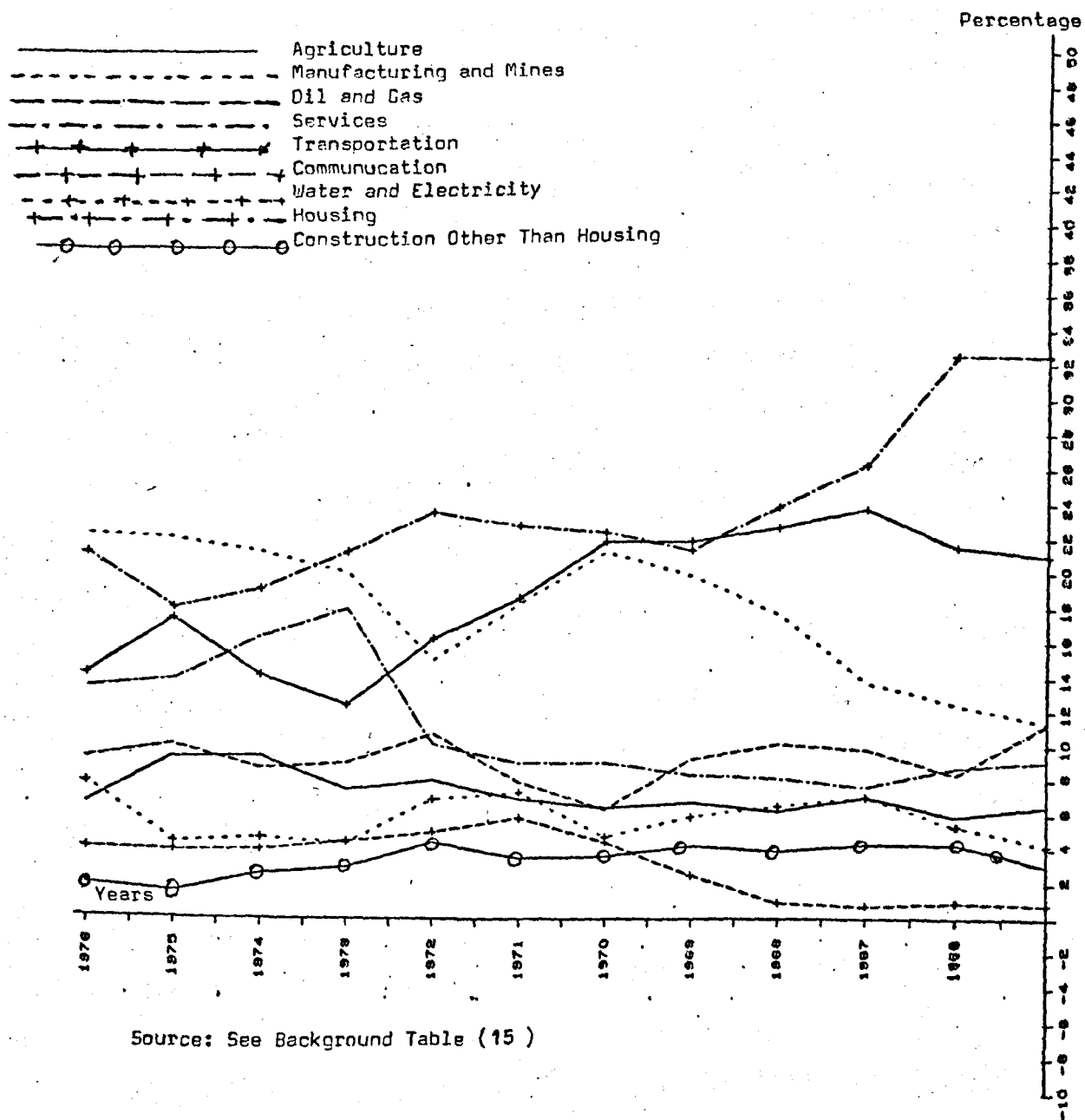
site trend of investment in the housing and manufacturing sectors can be interpreted as the competitive nature of investment in these two sectors. Although with the improvement of investment opportunities and a reduction in the degree of riskiness of investment in the manufacturing sector, to some extent, private investors have moved from housing to manufacturing and service sectors, it should not be considered as a significant change in the pattern of private investment. Taking into account that housing has been the main area of the private sector, accounting for 75 percent of the private investment, the declining trend of investment in housing should be interpreted as the total reluctance of the private sector to increase its contribution in the total capital formation as fast as the public sector, rather than a move away from the housing sector. As will be explained, the public investment contribution in the capital formation in the manufacturing sector has been rising during the period under study, and this has been the main reason for the upward trend in the investment in the manufacturing sector (see chapter 4).

The service sector accounts for 35 percent of gross domestic capital formation in 1975. Although it shows an increasing tendency, the trend is not as clear as in the case of industrial and mining sector (figure II-3). However, a structural change can be seen in the composition of capital formation in this sector. The share of capital formation in transport, which had reached 23.7 percent of the total GDCF in 1967 declined to 12.4 percent in 1973 and again moved up to 18 percent in 1975. While investment in transport shows a decreasing trend, the 'other service' including the public and private services shows a steady upward trend from 7.6 percent of GDCF in 1967 to 17.9 percent in 1973. The sharp increase in the share of investment in the service sector, from 10.1 percent in 1972 to 17.9 in 1973, is particularly the result of government spending in the public services (figure II-4).

The agricultural sector has the lowest contribution to the domestic capital formation, that is around 6.5 percent in 1975. Its share has remained stable during 1965-75 period. Relative to the share of value added of different

Figure (II-4)

Ratio of GDFCF Relative to GDP at Constant Prices By
Economic Sectors
(Percentage)



sectors, the lack of capital formation in the agricultural sector is very significant.

The three main indexes of economic development clearly indicate the uneven development of the Iranian economy during 1959-76. Basically, this uneven development may have been the result of the government economic policy in the assumption that the multiplier effects would take care of development of different sectors as long as the effective demand had been created. Based on this assumption, the development of manufacturing and service sectors has largely been emphasised while the agricultural sector has relatively been ignored. However, contrary to the assumption, the multiplier effects have failed to influence the development of the agricultural sector due to the effects of oil revenue on the structure of the economy and other economic bottlenecks (see chapters 3, 4 and 5) and therefore has resulted in the non-proportional growth of different sectors of the economy.

This uneven development is also characterized by a dualistic condition in the sense that the change in the pattern of output has not been accompanied by a similar change in the pattern of employment. While the development of the manufacturing sector has increased the overall productivity, its effect on employment has been insignificant. As will be explained, the emphasis of government economic policy in the development of the manufacturing sector has largely been on the growth of productivity and output rather than employment (see chapter 4).

However, alternatively the service sector has been expanded with the help of oil revenue in order to create the necessary jobs for the new comers to the labour market. But, its effects, together with that of the industrial sector, has not been in the form of a structural change in the composition of labour force, and the agricultural sector has remained as the main source of employment.

Another effect of the non-proportional growth of the service sector,

which its desirability and necessity can be questioned on economic grounds (see chapter 5), is the expansion of aggregate demand above the capacity of other productive sectors and particularly the agricultural sector. Not only has it aggravated the pressure on the balance of payments in the short-run and has retarded the development of agricultural sector (chapter 3), it has also created short run high consumption with a long run expectation effect which the Iranian economy no longer can provide without the expansion of the oil sector.

These structural problems of the Iranian economy are by and large caused by the irrational economic policy, both with regard to government expenditure and the over-utilization of the oil resources(see chapter 8), which have mainly been affected by the socio-political structure of the society. In the following chapters, we will analyse the government expenditure and credit policy which has resulted in the above structural problems.

Note

- 1- The declining share of agricultural sector in GNP in the process of economic development is a well known historical development. For some empirical examples see G.B.Fisher, Production; Primary, Secondary and Tertiary, Economic Record, June 1939; Maizels, A. Growth and Trade, Cambridge, 1970; Chenery, H., Patterns of Industrial Growth, American Economic Review, September 1960; Holub, A., A Brief Review of Structural Development in Developing ECAFE Countries, United Nations, Economic Bulletin For Asia and the Far East, June/Sep., 1970.; Thirlwall, A.P., Growth and Development, Macmillan, 1974.; Chenery, H. and Syrquin, M., Patterns of Development 1950-1970, Oxford University Press, 1975.
- 2- The estimation made by BMI (Bank Markazi Iran, the central bank) is based on the sample observation of the growth for selected large manufacturing. The BMI's estimation is usually higher than that made by SCI (Statistical Centre of Iran) whose estimation is based on large sampling for the labour force in the country. For instance, the figure provided by BMI in 1973 for the manufacturing sector alone is around 2020 thousands persons, while that of SCI is 1879 thousands persons for the industrial sector as a whole (including manufacturings, construction, electricity and water). See BMI, Annual Report and Balance Sheet 1973, P. 76.
- 3- Plan Organization, Second Development Plan, Op.cit., PP. 8-9.
- 4- Ibid., P.9.

Chapter Three

3 Development of Agricultural Sector

Introduction

In order to evaluate the effects of government policies with regard to the development of the agricultural sector, one has to recognise the possibilities granted by the factor endowment of the country and desirability of the expansion of the agricultural sector in relation with other sectors of the economy. While the first factor determines the importance of the agricultural sector at the aggregate level with regard to employment and production, the second consideration largely affects the choice of products and the balance between products (a) primarily for exports, (b) crops which are industrial raw materials, and (c) basic food stuffs. Although a combination of the types of output may affect the maximization of output¹, here, we confine our analysis to the aggregate performance of the agricultural sector and the related government policies.

There are two general considerations which should be taken into account with respect to development of the agricultural sector, first, the importance of employment and the raising of output. The employment consideration comes as an important factor when we consider the factor endowment of the country. It is the factor endowment which theoretically determines the policy which should be pursued by the government. In other words, the factor endowment may determine the appropriate technique which should be encouraged in the agricultural sector.

Taking the maximization of output as the first object of the government policy, it can be achieved through a combination of factor endowment (capital, labour and land). Depending on the constraining factor in the economy whether it is capital or labour or land, the government should encourage a

particular technique of production which maximize the utilization of the constraining factor. Taking land as a given factor, the choice of technique will be dependent on the degree of substitutibility of capital for labour and vice versa, and constrained by the diminishing rate of return of land. But, there exists an important consideration with regard to the use of capital in the agricultural sector which makes it suitable as a substitute (to some extent) for both labour and land. We have to distinguish between two types of capital- those which replace labour (e.g. tractors, combines and so on; generally mechanization), and those which replace land (e.g. fertilizers, improved seeds and so on; generally biological capital)².

With such possibilities, in a developing country like Iran where the agrarian labour force is abundant and there is a considerable volume of unemployment (open and disguised), there is obviously a strong argument for putting in as much investment as possible in biological capital.³ The importance of agrarian employment will be doubled when we recognize the slow growth of employment in the industrial and service sectors. Therefore, the government has to consider productivity of labour through the raising of land productivity rather than substitution of labour by capital. In other words, the government has to emphasize the utilization of biological inputs rather than mechanization in the Iranian agricultural sector. Based on this argument we analyse the performance of the Iranian agricultural sector and the effects of the government investment and credit policies on the performance of this sector.

3-1 Performance and Problems of Iranian Agricultural sector

The Iranian agricultural sector consists of farming, animal husbandry, fishing and forestry. Farming, on average, accounts for 68 percent of production in this sector while animal husbandry contributes another 30 percent

Composition of Value Added in
The Agricultural Sector

Table (3-1)

Current Prices

Billion Rials

Sector	1959	1961	1963	1965	1967	1970	1973	1976
Farming	58.8	60.0	67.1	83.1	87.6	113.7	150.2	281.2
%	(68.8)	(64.7)	(68.2)	(69.3)	(68.2)	(70.8)	(64.1)	(65.4)
Live Stock Breeding	25.5	31.4	30.2	35.4	39.2	44.3	77.3	138.1
%	(29.9)	(33.9)	(30.7)	(29.5)	(30.5)	(27.6)	(33.0)	(32.1)
Forestry	0.9	1.0	0.7	1.0	0.9	1.6	5.4	8.3
%	(1.0)	(1.1)	(0.7)	(0.8)	(1.0)	(1.0)	(2.3)	(1.9)
Fishing	0.2	0.3	0.4	0.5	0.7	1.0	1.5	2.5
%	(0.3)	(0.3)	(0.4)	(0.4)	(0.5)	(0.6)	(0.6)	(0.6)
Total	85.4	92.7	98.4	120.0	128.4	160.6	134.4	430.1
%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Source: BMI, National Income of Iran, 1959-71; and Annual Reports, 1972-6.

(table 3-1). The performance of these two sub-sectors is the main determinant of the performance of the agricultural sector. During 1959-76, the performance of this sector has been poor, not only relative to other sectors, but also, in absolute terms. The growth rate of output in the agricultural sector has been low by any criterion. The official figures show that growth rates ranged between -7.1 to 8.9 percent for different periods (table 3-2), sometimes higher but occasionally lower than the population growth rate. Some experts of the Iranian economy believe that the growth rate in this sector has never been higher than 2.6 percent⁴ during 1960-76 which is lower than population growth (around 3 percent).

This poor performance of the agricultural sector cannot be attributed to totally bad harvests, although some truth may be behind it. Water shortage characterizes the Iranian agriculture and it makes the economic performance of this sector heavily dependent on rainfall, particularly, if we consider that the share of unirrigated lands in the cultivated areas is large. However, without any change in the organization of production and the social relation the poor performance of the agricultural sector could have been attributed to bad harvests. But, with the advent of land reform in 1962 and the possible intervention of the government in this sector, one would expect to see some fundamental reasons behind the poor performance of this sector.

Basically, the Iranian agricultural sector suffers from low productivity of labour and land. Using the official figures for agricultural output, which may be overstated, the output per worker (at constant prices) has improved at annual rate of 2.8 percent during 1959-76. The output per worker has risen from 25.0 thousand Rls. in 1959 to 40.1 thousands Rls. in 1973 and has since remained unchanged (table 3-3). The above rate of growth of productivity has been very slow in comparison with those of the industrial and service sectors (9.9 and 8.7 percent respectively).

However, due to the change in the structure and organisation of produc-

Annual Growth Rates of Agricultural Output

Table (3-2)

Percentage

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Annual Growth Rate	2.0	0.9	1.0	1.7	2.1	7.9	3.4	7.8	7.8	3.1	4.6	-7.1	8.9	5.7	5.9	6.8	6.4

Source: see Table (3-1)

Labour Productivity

By Economic Sectors

At (1959) Constant Prices

Thousand Rials

Table (3-3)

	1959	1966	1971	1972	1973	1976	Annual Growth Rate			
							1959-66	1966-72	1972-76	1959-76
Agriculture	25.0	30.5	35.1	35.5	40.1	39.8	2.9	2.6	2.9	2.8
Industry	34.1	48.8	96.0	97.0	119.4	169.3	5.2	12.1	9.7	9.9
Manufacturing	-	49.7	-	94.0	-	-	-	11.2	10.4 ¹	-
Construction	-	42.0	-	60.4	-	-	-	6.2	-	-
Service	66.9	119.2	163.8	185.6	253.5	277.7	8.6	8.6	9.2	8.7
GDP ²	41.0	65.0	104.2	111.6	137.8	158.0	6.8	9.4	9.1	8.2

Note: 1- For source see BMI, Annual Report, 1973-76. 2 - GDP includes oil production.

Source: see Table (II-4) and Back Ground Table 11

tion in this sector, the performance of labour productivity has been better than that of land productivity in the case of farming sub-sector. As table (3-4) shows the growth of per hectare output (in physical terms, Kilogram) of wheat and barley, which together accounts for 75 percent of the sown area (60 percent wheat and 15 percent barley), has been almost zero for wheat and negative in the case of barley. Since the table covers a long period, the bad performance cannot be attributed to climatic changes. Comparing the per hectare output during 1963-74 to that of 1950, it is clear that the former has been lower than that of the latter for most of the period. This poses a question why, despite the change in the social relation and the organization of production towards the domination of the capitalist farming in the agricultural sector, the productivity did not improve. There are two sources of explanation: political factors and technical factors.

Historically speaking, after the set back of the national bourgeoisie during 1950-4, the political situation came to an unstable equilibrium of compromise among the dominant social classes during 1950's and early 1960's. In order to break down the feudalistic structure of the society, a land reform program was introduced which in the main did not attack the economic interest of the feudal landlords but largely reduced their political power. Due to the political nature of the reform, the program did not evaluate the economic consequences of the reform; economic organisations and particularly the Plan Organization as the main economic planning centre was not aware of the advent of the land reform⁵. The ignorance of the Plan Organization can be seen from the third plan's final report where it refers to the failure of the government to achieve the plan target. "The third plan objective of a 4 percent growth rate presupposed substantial investment during the plan period on part of private individuals and companies. However, in practice not only did this presumption fail to materialize, but investment in this sector was actually lower than it had been in previous years because

Land Productivity

Table (3-4)		Kiloqram Per Hectare	
Year	Wheat	Barley	
1950	900	1010	
1963	750	830	
1964	700	750	
1965	750	830	
1966	760	830	
1967	1050	1360	
1968	900	830	
1969	820	950	
1970	710	640	
1971	700	650	
1972	900	721	
1973	920	659	
1974	820	654	

Source: Food Agriculture Organization, FAO Production Year Book, 1976.

Disbursement Of Plan Organization
For Agriculture and Water ¹

Table (3-5)		Million Rials		
Sector		Third Plan (1963-68)	Fourth Plan (1968-72)	Fifth Plan (1973-78)
Agriculture		25622	45704	239000
	%	(12.5)	(9.0)	(8.4)
Water		21670	42009	160000
	%	(10.6)	(8.3)	(5.6)
Total Plan		204600	506800	2847000

Note: 1- Figures In () indicate the share in total plans.

Source: Plan Organization, Final Report on the 3th Plan; BMI, Annual Report 1972; Plan and Budget Organization 5th Development Plan.

the implementation of land reform led a number of landlords to believe that there was insufficient security for investment in this sector."⁶

However, the distribution of land into uneconomical units has diminished the marginal productivity of labour (as far as it caused under-utilization of the existing machinery and other inputs) and has reduced the possibility of mechanization of cultivated plots. Generally, the land reform has decreased the private capital formation in agricultural sector⁷; on one hand, the previous productive land was left to low income peasants almost without necessary capital. On the other hand, the high propensity to consume and the illusion of a promising future in regard to a higher income level increased the own-consumption of peasantry who lived at subsistence level and made the increase of private capital formation out of question. This chaotic situation after the land reform has well been explained in the final report of the third plan where it refers to the utilization of agricultural loans to peasants; "... a large portion of these loans granted in 1342 (1963) and 1943 (1964) were used for non-productive purposes because of drought and especial conditions consequent upon the implementation of land reform legislation,...."⁸ This situation left the responsibility of capital formation entirely on the government programme for development of agricultural sector. However, "the government failed to take effective measure to compensate for this deficiency of investment, and failed to exploit fully its investment in dam construction."⁹

The lack of technical assistance and inefficient utilization of irrigation capacity were important factors in the poor performance of the agricultural sector. But, the greatest deficiency was in the creation of the necessary credit for the peasants after the land reform. The agricultural sector did not receive sufficient assistance during the third plan. The disbursements of the third plan shows that about 20.8 Billion Rs. was spent for agricultural development (also, about 21.6 Billion Rs. was allocated

to irrigation). It accounts for 12.5 percent of the total plan spendings (together with irrigation, it accounts for 23.1 percent of the total plan disbursements; table 3-5). In order to evaluate the spendings on the development of the agricultural sector, table (3-6) has been reclassified according to the Direct Government Investment (DGI) and Direct Government Assistance (DGA). The former includes the overhead capital for agricultural development and its effects are to be realized in the long run. It covers improvement of agricultural products, conservation of natural resources, animal husbandry and veterinary services, vegetable produce and research and training. The latter has an immediate impact on the capital formation or consumption and its effects would materialize in the short run.

Table (3-6) shows that DGI accounts for 38 percent of the government expenditure for development of agricultural sector while DGA has the largest share that is 62 percent of the total. About 29.2 percent of the share of agricultural development was spent for the implementation of land reform and was used for financing of the land acquisition from the landlords, establishment of the co-ops required by the law and other relevant expenditures; this should not be considered as agricultural development (for the landlords' compensation, see Appendix A). Thus, only 32.8 percent was allocated for the backing the peasants after the land reform. As it was mentioned, due to the poor performance of agricultural output, most of the credit available to peasants (including the credit made through Agricultural Development Bank) was spent for consumption and had little effect on the capital formation and the future output. In fact the share of agricultural credit was as low as 3.3 percent of the total development plan which by any criterion would have been low even if the credit had been properly utilized.

The above explanation shows that the structural problem of the Iranian agricultural sector in the early 1960's was mainly the lack of capital formation. One of the probable reasons for the unsatisfactory economic perfor-

Disbursement of Plan Organization
For Development of Agricultural and Water Sectors

Table (3-6)

Million Rials

Disbursement	Third Plan (1963-68)	Fourth Plan (1968-72)	Fifth Plan (1973-76)
Direct Government Investment	7889	23253	53644
%	(38.0)	(50.9)	(47.0)
Direct Government Assistance	12934	22451	60437
%	(62.0)	(49.1)	(53.0)
1- Land Reform	6100	10620	-
%	(29.2)	(7.9)	
2- Large-Scale Agricultural Units	-	8230	17932
%		(18.0)	15.7)
3- Agricultural Credit	6834	3601	42505
%	(32.8)	(23.2)	(37.3)
Sub-total	20883	45704	114081
%	(100.0)	(100.0)	(100.0)
Irrigation	21670	42009	98179
Total	47292	87713	212260

Note: 1- Figures are related to the actual disbursement during 1973-76.

Source: See Table (3-5)

mance after the land reform was that the government had not considered the economic consequences of the land reform and it was only socio-political factors that determined their objectives of breaking down feudalist social relations. Also due to the same factors, the importance of the agricultural sector was undermined in the preparation of the third development plan.

However, it is after 1967, when the government realized the significance of the economic consequences of the land reform. It has tried to improve the situation through a set of economic policies. However, the overall performance of the agricultural sector as pictured above indicates that the government has not been successful in its development programme in this sector even after 1967. Here, we will examine the effects of the government intervention on the performance of the agricultural sector and the reasons for the failure of such intervention.

3-2 Government Policies

In the evaluation of government economic policies, we are mainly concerned with the effects of the DGI and DGA on the performance of the agricultural sector. Nevertheless, in order to clarify those effects, we also consider the importance of the organization of production and the government import and price policies. Therefore, the government policies towards the agricultural sector can be divided into following categories:

- 1) Provision of technical assistance
- 2) provision of credit
- 3) Restructuring the organization of production
- 4) Policies which affect the price of agricultural products and incentive for investment, e.g., price controls of one kind or another, import of agricultural goods and so on.

Before discussing the government policies towards the agricultural sector in detail, it is necessary to look at the relative importance of this

sector in the total development plans. As table (3-5) shows the total government payments for development of agricultural sector hardly reached 9.0 and 8.4 percent during the Fourth and Fifth Plans which were lower than that of the Third Plan allocation for this sector. Together with water, the total allocation reached 17.3 and 14.0 percent in the Fourth and Fifth Plans which still are lower than the previous plan. The above indicates that the agricultural sector has lost its relative importance in the total plans' allocations. However, in absolute terms, the allocation has rapidly increased during these plans. The disbursement of the last two plans were 185 and 843 percent higher than that of the third plan allocation for the agricultural sector.

However, a change can be seen in the allocation of plans with regard to DGI and DGA in the agricultural sector. As table (3-6) depicts the government has emphasised on the DGI during the Fourth and Fifth Plans. DGI accounts for 50.9 and 47 percent of disbursement of plans for development of agricultural sector. The higher emphasis on the DGI can be interpreted as the higher provision of technical assistance. This change in the pattern of allocation shows that the government has tried to improve the performance of the agricultural sector indirectly and through the introduction of new method of cultivation, biological and technological changes in the agricultural sector. This change of emphasis could be beneficial in the long run only if the technical assistances were the right sorts and were fully utilized by majority of farmers, the problems of which are the main concern of the following section.

3-2-1 Provision of Technical Assistance

Government technical assistance in the agricultural sector covers a number of government activities which may indirectly improve the performance of the agricultural sector by providing new improved seeds, chemical

fertilizers, mechnization, the introduction of new method of cultivation which ensure a higher utilization of scarce resources and provision of marketing facilities. Here, we may enlarge the definition to cover also the government investment in infrastructure maily for development of water resources and irrigation system.

Despite the enormous government spendings for technical assistance, it seems, the government has not succeeded in affecting the performance of the agricultural sector and particularly the land productivity (see PP 122-3). However, it does not mean that the use of technical inputs has not increased at the national level, but in fact, it explains the structural problem of the Iranian agricultural sector and inadequacy of government assistance.

Classifing the government assistance to biological and mechanical assistance, we may use the growth of chemical fertilizers and tractors as proxy measures for the degree of effectiveness of government technical assistance in the agricultural sector. As table (3-7) shows after the land reform, the total chemical fertilizers used in the agricultural sector reached 215 thousands tons in 1967 when the economy came back to its normal trend after the disturbance period of the land reform. During 1967-72, the use of chemical fertilizers in the national level increased at a rate of 12 percnct annually, although with some fluctuation. However, the pattern illustrates a sharp increase during 1972-4, that is an annual growth rate of 27.5 percent(a similar pattern can be seen in the case of improved seeds). This was largely due to the new government policy which came along with the increase in the oil revenue. In order to encourage the private sector investment in agricultural and related areas, the Budget Act of 1973 and 1974 authorized wide investment incentives. These incentives in the case of biological assistance cover the use of chemical fertilizers, improved seeds and spalings, disinfecting chemical and seeds and spalings etc. The incentives are given in

The Application of Technical Inputs
To Iranian Agriculture

Table (3-7)

Year	Chemical Fertilisers (1000 Tons)	Improved Seeds Distributed (100 Tons)		Tractors (Unit)
		Wheat	Cotton	
1957	-	-	-	725
1958	-	-	-	1301
1959	-	-	-	1169
1960	-	-	-	1283
1961	-	-	-	1223
1962	-	-	-	645
1963	58	24.0	7	133
1964	71	30.0	27	714
1965	86	38.0	20	1347
1966	124	76.3	17	1133
1967	215	56.0	20	2382
1968	184	65.0	25.7	2967
1969	208	-	25.0	3369
1970	243	127.9	34.0	1894
1971	328	329.8	31.2	2458
1972	379	340.0	93.2	5787
1973	482	355.0	111.8	4781
1974	616	646.2	110.0	7561
1975	624	580.0	95.2	9038
1976	601	-	-	6626

Source: Plan Organization, Statistical Centre of Iran, Statistical Year Book, 1967 and 1972-76.

the form of subsidies or grant depending on the legal status of the recipients (individuals, co-operatives, or farm corporations). The ratio of subsidy for fertilizers is 20 percent at most, for seeds 50 percent; for other 100 percent¹⁰.

However, despite the large subsidy granted to the private sector, the use of such incentives are dependent on the ability of farmers to invest in the agricultural sector. Therefore, the main recipients of such assistance are those organization which are able to embark on the basic investment (see PP 153-63 for the government discriminatory policy). It is clear from the above explanation that although the provision of technical inputs is necessary, it is not sufficient, since the lack of necessary credit to peasants makes the application of such inputs in the agricultural sector impossible. Thus, only the minority, large scale agricultural units, are able to utilize such assistance. At least, data available for 1971 shows that only 2.3 percent of fertilizer used in the agricultural sector was chemical fertilizer¹¹.

It is not known that to what extent the government subsidies, since 1973, have induced the traditional farmers to use new improved seeds or chemical fertilizers. But, the land productivity in the national level shows no improvement and this can be interpreted as the failure of the government policy with regard to technical assistance. The land productivity may be a good proxy measure for the degree of effectiveness of biological inputs since they mean to raise the land productivity¹². The reasons for the failure may be the lack of complementary assistance apart from the credit policy. In the main, the use of new seeds and chemical fertilizers can only improve the land productivity, if the irrigation system and the method of cultivation allow a higher and more efficient utilization of water. The experience of other countries shows that the new seeds and fertilizers require more water, otherwise, the productivity of land may even decrease¹³. The shortage of water and the lack of qualified personnel to spread the new method

of cultivation characterize the Iranian agriculture sector. These factors, too, can limit the use of biological inputs to large scale agricultural units which are able to invest in the irrigation system or receive the government assistance for irrigation.

However, our second proxy measure, the growth of tractors in use, also shows a similar picture. Before the land reform, the number of tractors sold by Organization for the Development of Agricultural Machinery (public organization) reached at 1283 units in 1960. During the land reform, the investment in the agricultural machinery declined and therefore only 133 tractors were sold in 1963 and it was not until 1967 when the trend came back to its normal pattern. However, one can hardly speak about the rising of tractors in use in the agricultural sector; the growth rate did not exceed 0.7 percent during 1967-70 period. Since 1971, the number of tractors used in the agricultural sector has risen at an annual rate of 38 percent and reached 9038 units in 1975-76. The pattern has been affected by four major factors:

First, since 1968 the government has encouraged the large scale agricultural units with different organization of production (see PM50-63). This has resulted in the rapid mechanization of the new farms established under the government policy for restructuring of the organization of production.

Second, the government through its macro-economic policy (fiscal and monetary policies) under the effects of oil revenue has influenced the factor proportion in favour of capital.

Third, the inflationary pressure resulted from the government over-spending during 1973-76 has raised the average wage level in the agricultural sector and created a temporary change in the structure of employment in the sense of shortage of manpower in the agricultural sector. This has induced the capital intensity in this sector.

Fourth, since 1973, the government subsidy for land leveling and irrigation at a 50 to 100 percent of the actual costs (depending on the type of organi-

zation of production)¹⁴ may have encouraged the mechanization of agricultural units even in the medium size.

However, mechanization largely affects the labour productivity and the cost of production rather than rising of land productivity. It may induce the land intensive technique of cultivation by lowering the cost of ploughing, land leveling and so on. It is true that by bringing more land under cultivation, the output at aggregate level increases, but the application of land intensive technique is limited by the available arable land of the country. With the expansion of cultivated lands, bringing new land under cultivation will be more and more costly. Although the government has been fairly successful in the mechanization of new farms and raising the output at the aggregate level, it does not mean this policy would continue to produce fruit. On one hand, sooner or later, the expansion of cultivatable lands will come to end, on the other hand, an efficient utilization of such investment in the agricultural sector under the existing structure of organization of production is very much in doubt even in the case of large scale agricultural units (see PP150-63). Therefore, a higher attention towards the biological improvement will be necessary for rescuing the Iranian agricultural sector.

The higher mechanization of farm units has created two main effects with regard to the structure of employment and distribution of income: First, it has created a large seasonal unemployment in the rural areas. Although during 1974-6 the government-overspending in the construction has absorbed a large share of seasonally unemployed (see chapter 4), it has not created a structural change in the pattern of employment. Ignoring the short-term effects, one may assume that it will take a long time before the number of employed labour force in the agricultural sector in the absolute terms starts to decline, particularly, if we consider that the expansion of the industrial and service sectors will be limited by the declining trend in oil revenue in near future. Assuming the level of employment in the agricul-

tural sector is mainly determined by the level of employment creation in the industrial and service sectors, the government policy with regard to expansion of mechanization would add to the problem of employment creation in the medium and long run. Secondly, assuming the rising of peasant's income depends on the growth of land productivity, mechanization may not contribute in the rising of income of traditional farmers, therefore, the government subsidy and direct investment may largely widen the existing gap of income within the agricultural sector in favour of those who have benefited from the government intervention. The above effects indicates that with respect to the employment and distribution of income policies, the government intervention has aggravated the situation in the agricultural sector. Had the government paid greater attention to the biological inputs and an efficient utilization of such inputs, the productivity of land could have risen and thereby an improvement in the farmer's income could have been made. However, the utilization of such investment efficiently is largely dependent on the complementary inputs in particular water.

However, the most important problem of Iranian agricultural sector arises from water shortage for irrigation. Around 65 percent of the 100 Billion cube meters of water available for use has annually been diverted for irrigation uses.¹⁵ Out of which at least a quarter comes from ground water resources. Some experts have estimated that if water resevoirs are fully utilized, it would be sufficient to adequately serve 8 to 10 Million hectares of land¹⁶ which accounts for 80 to 100 percent of cultivated lands in 1974. However, it is believed that only up to 4.5 Million hectars or 27.4 percent of the cultivatable lands can be fully irrigated and thereafter the costs of exploitation would rise rapidly. In 1974, around 4.1 Million hectares were irrigated which accounts for 39 percent of total land under cultivation¹⁷. Therefore, if the above estimation is correct, the possible expansion of irrigatable lands with no significant change in the cost of produc-

tion is very limited, that is not more than a further 3 percent can be irrigated in this way. This estimation indicates that the cost of irrigation will rise sooner or later even when we account for more efficient utilization of the existing water resources.

Under the above circumstances in which water is regarded as the constraining factor, the most important government technical assistance will be in the form of DGI in irrigation. The plans' disbursements for water suggest that between 8 to 10 percent of the total government investment during 1968-76 was allocated to this sector. Although the government investment in water covers both the utilization of surface and ground water, it has mainly been concerned with the exploitation of the former. Generally, the government policy has been as such to leave the exploitation of ground water to the private sector and has limited its investment to exceptional cases which mainly benefited the farm corporations (see PP159-60). The main reason for taking such policy is that the government believed that the private sector is able to develop the ground water in which the necessary investment is not substantial. Although during the Fourth Plan, not more than 1.8 percent of the government investment in water was directly allocated to the exploitation of ground water, the government subsidies for irrigation have been large since 1973-4..

However, in the exploitation of surface water, the government has mainly been concerned with the construction of multi-purpose dams rather than the utilization of such investment in the agricultural sector. At least, some reports suggest that the inefficient utilization of investment in dams for irrigation purposes has been due to the lack of investment in the infrastructure in irrigation net work during the Fourth Plan.¹⁸ Nevertheless, the government tried to increase the utilization of irrigatable lands under dams through restructuring the organization of production. Since 1968 the government has encouraged the establishment of large agricultural units

under the dams. This policy was taken due to the following consideration:

a) the government assumed that the large private (foreign and local) investors are able to invest in the necessary irrigation net work. b) based on the non-irrigated per hectare output in the dam areas, the government assumed that the income generated through the traditional small farming would not be sufficient to cover the cost of exploitation of water resources in the dams areas(see PP 153-6).

As far as the first assumption is concerned, practically, the government has undertaken a large share of the cost of utilization of surface water through its direct investment and its subsidies to large scale agricultural units (see PP 150-63). Altogether, it is estimated that the cost to the government for the development of irrigated lands under dams has averaged \$ 2000 per hectare¹⁹ excluding the cost of land acquisition from petty farmers in the areas. In the case of the latter assumption, one report indicates that over five years the traditional farmers were able to increase their income from land by 300 percent with the help of irrigation facilities available to them.²⁰ As we also will show later (see pp 152-3), the performance of the large scale agricultural units under the dams lands has not been better than that of small traditional farmers whose lands have been irrigated. Therefore, both cases show that the government assumption have been based on inadequate research on the cost-benefit analysis of government investment in the exploitation of water for irrigation purposes and the lack of understanding about the effects of necessary incentives on the productivity of traditional farming.

However, since 1973 the government has emphasised the subsidies and has left the investment in the irrigation facilities on the part of private sector. 85 to 100 percent of the cost of studies, design and other preparation and 50 to 100 percent of construction costs for on-farm irrigation and drainage have been undertaken by the government. These subsidies mean

to benefit private farmers and co-operatives at a rate of 50 percent and the farm corporations at a rate of 100 percent²¹. Therefore, taking these subsidies into account, the cost of development of irrigated lands to the government is very much higher than the estimation based on the direct government investment in the irrigation and dams construction. Considering that around 60 percent of cultivable lands is not irrigated, the cost of raising land productivity through irrigation will be still higher in the future. The cost is affected by the uncomformity of the geopgrhical distribution of cultivatable lands and the pattern of precipitation. The Caspian littoral and Western regions, with only 25 percent of total land area, account for 52 percent of total precipitation. The central plateau, with 50 percent of total land area, accounts for only 28 percent of total precipitation, and the east and south of the country, with 25 percent of total land area, account for the remaining 20 percent of total precipitation²². With the above patterns of land resevoir, a large substantial investment for the diversion of necessary water to the irrigatable lands has to be undertaken if full exploitation of the surface and ground water is to be achieved. The estimation given in P.135, seems to be based on the above consideration about the pattern of distribution of lands and water. Nevertheless, if the land productivity is to increase, a higher cost of irrigation is to be undertaken since the performance of the agricultural sector is largel dependent on the possibility of irrigation (see Appendix B for the difference in the land productivities) in the future.

Altogether, the provision of technical assistance shows that despite the high government investment in technical assistance and irrigation, its policy with regard to distribution of such assistance has led to inefficient utilization of investment in the agricultural sector. In the main, the government policy has discriminted against the majority of farmers by emphasising mechanization and development of large scale agricultural units. With regard

to irrigation policy, similarly, the government has weighed the development of surface water in order to be utilized by large scale agricultural units. This has left the majority of farmers to rely on the traditional method of irrigation. Considering water as the constraining factor in Iranian agriculture, the government policy with regard to irrigation has also caused an inefficiency in the utilization of government investment in technical inputs such as new improved seeds, chemical fertilizers and so on. Consequently, one may say that the the DGI has benefited those organization of production which have been able to bear the basic investment in irrigation and technical inputs. This, to a large extent, leaves the utilization of the DGI by different organization of production to the government credit policy which ensures such basic investment.

3-2-2 Provision of Credit

The importance of the provision of credit by the government arises from two factors: First, as was mentioned above, the utilization of DGI by farmers is largely dependent on the possibility of the basic investment by these groups of producers. Therefore, the sufficient credit may make such utilization possible. Second, since peasants have traditionally received their credit through money lenders who in one way or another extract a large percentage of peasants' disposable incomes, the provision of cheap credit by the government not only will raise the immediate peasants disposable income, but also, it may reduce the need for such credit in the future when the peasants saving become sufficient to finance the basic investment.

Here, we will look at the government credit policy from two points of views: a) whether the government credit has been sufficient to eliminate the importance of the rural money lenders. b) which organization of production have benefited the most from the government money ? Whether such discriminatory policy has improved the performance of the agricultural sector

or not (section (b) will be discussed under heading of 'restructuring of organization of production).

On average around 30 percent of the agricultural disbursement was spent on supporting peasants through agricultural credit which is lower than that of the Third Plan allocation (tables 3-5 and 3-6). It accounts for only 1.4 percent of total Fourth and Fifth Plans which is too low to lead to a considerable change in the agricultural sector particularly if we consider that the peasant saving is almost zero or even negative. It may be argued that the establishment of co-operatives would lead to a self-financing stage and the provided capital under the land reform allocation would come to its fruitful point. However, as will be explained later, co-operatives appear to be complete failures (see PP 163).

Table (3-8) shows the total credit granted by the banking system to the agricultural sector including the agricultural disbursement of the Plan Organization through co-operatives; the plan's share accounts for about 10 percent of the total credit. The share of the agricultural sector has never been more than 11.4 percent of the total credit to the private sector and at lowest it was 6.3 percent. If it was evenly distributed, it could provide a sum of 1077.4 to 2133.7 Rials per hectare which is well below the minimum required credit as will be explained below.

This minimum for productive purpose in the agricultural sector has been estimated at 70.0 Billion Rials in the aggregate level for 1970 and 1971²². Based on this estimation the credit required for one hectare would be about 4400 Rials. Allowing for the rate of inflation and therefore an increase in the cost of production, the minimum credit for 1972 and 1973 would be 4700 and 5300 Rials respectively. As table (3-9) shows the total credit available through the banking system (including government credit) is still not sufficient to cover the minimum required. Assuming no peasant saving, in 1971, about 75 percent was to be provided through the traditional,

Bank Credit to the Agricultural Sector

Table (3-8)

	Billion Rials									
	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976
Total ¹										
Credit Granted By Banking System To Agricultural Sector	15.0	18.9	20.3	18.4	17.4	28.9	37.3	62.6	94.0	131.1
%	(10.7)	(11.4)	(10.4)	(8.0)	(6.3)	(8.0)	(7.7)	(9.0)	(8.8)	(8.9)
Government Credit ²	(5.2)	(5.3)	(5.4)	(8.9)	(9.6)	(14.4)	(22.8)	(39.4)	(58.7)	(84.7)
Total Credit Granted in the Country	140.0	165.0	195.7	228.5	274.9	359.7	486.7	691.9	1068.5	1464.9

Note: 1- Figures in () indicate the share of banking credit to the agricultural sector in the total credit granted in the Country.

2- Credit distributed by Agricultural Co-operative Bank of Iran and Agricultural Development Bank of Iran (ADBI). The contribution of ADBI for 1973-76 are, 2.8, 8.3, 23.4 and 42.3 Billion Rials.

Source: BMI, Annual Reports, 1969-76.

Source Of Credit
Per Hectare of Land¹

Table (3-9)

Rials

	1971	1972	1973
Minimum Required Per Hactare	4400	4700	5300
%	(100.0)	(100.0)	(100.0)
Government	594.4	939.3	1304.3
%	((13.5)	(20.0)	(24.6)
Banking System	483.0	945.9	829.4
%	(11.0)	(20.1)	(15.7)
Peasant Saving	550.5	658.2	672.2
%	(12.5)	(14.0)	(12.7)
Money Lenders	2772.1	2156.6	2494.1
%	(63.0)	(45.9)	(47.0)

Note: 1- The calculation has been made according to the assumptions in the text.

Source: For data on Banking system see Table(3-8)

sources such as money lenders, shopkeepers and so on. It seems the provided credit in 1971 was exceptionally low compared with the previous year. However, the banking system and the government provide about 40 percent of the required credit and still 60 percent had to be sought through the traditional channels.

If the credit was evenly distributed, based on Katouzian's estimation, each household would receive a credit of 21875 Rials, assuming 3.2 Million rural family. Out of 21875 Rials the banking system and the government provided only 9031 Rials which is about 42 percent of the total. It has been argued by G. Pyatt²⁴ that peasants should have, at least, a minimum savings for perpetuation of their life; he assumes a 5 percent savings for the agricultural sector in Iran. Even if we allow for a 5 percent peasant saving, it would not have a considerable contribution in the total required credit; only 13 percent of the credit could be provided through peasant saving. However, it is not the poor peasants who have this savings, but it is the large scale-private enterprises who are able, to some extent, to self-finance their activities.

The above estimation is too crude to show the minimum required credit for a household survival. Also, it cannot show the possibility of using the credit since it may not be economically efficient for a very small unit of farming even to obtain such a loan. It may only result in a deep involvement of the farmer in the credit system while there is no possibility of increasing productivity and thereby clearing off debt. To illustrate these points an alternative estimation has been made (see Appendix B for the calculation).

Table (3-10) shows the minimum size of a farm either irrigated or unirrigated which allows the peasant to live at his previous living standard. The three lowest groups of consumption, which are far lower than the total average, have been chosen to show the minimum possible consumption.

Minimum Required Land and Credit For A Peasant Family

Table (3-10)

	Consumption - Group (Rials)					
	Un-Irrigated Lands			Irrigated Lands		
	Less Than 24000	24000 36000 to	36000 48000 to	Less Than 24000	24000 36000 to	36000 48000 to
Minimum Land (Hectare) (1)	5.2 (4.8)	8.8 (8.0)	12.0 (11.0)	2.0 (1.82)	3.4 (3.1)	4.7 (4.3)
Cost of Production Per Hectare (Rials)	1655.2	1655.2	1655.2	4197.3	4197.3	4197.3
Cost Per Hectare Twice Production a Year (Rials)	3310.4	3310.4	3310.4	8394.6	8394.6	8394.6
Value of Production Per Hectare (Rials)	3554.4	3554.4	3554.4	9097.3	9097.3	9097.3
Net Income Per Hectare (Rials)	1899.2	1899.2	1899.2	4900	4900	4900
Income - Consumption (Rials)	18067.7	30625.3	41938.3	18067.7	30625.3	41938.3

Cont...

Cont...

Saving 5% of Income (rials)	1706.0	2843.5	3909.8	1683.0	2820.2	3911.8
Total Disposable Income (Rials)	19773.7	33468.8	45848.1	19750.7	33445.5	45850.1
Total Required Credit (Rials)	15889.5	26483.2	36414.4	15530.0	26023.3	36096.8

Note: 1- Figures in () indicate the minimum land when the saving is excluded.

Source : see Appendix B

Distribution Of Holdings By Size

Table (3-11)

Size Of Holdings Hectare(H)	Under 1 (H)	1 (H) and under 2 (H)	2 (H) and under 5(H)	5(H) and under 10(H)	10(H) and under 50	50(H) and under 100	100(H) and over	Total
Thousand Holdings	801	342	542	434	394	10	7	2530
Percentage	(31.6)	(13.5)	(21.5)	(17.1)	(15.6)	(0.4)	(0.3)	(100.0)
	(45.1)		(38.6)		(16.3)			

Source: Plan Organization, Result of Agricultural Survey 1972.

Assuming the peasant has no means of production except his labour (and land), the minimum size of a farm under unirrigated cultivation which can provide him with the minimum consumption in the Province of Fars is 4.8 hectares. Allowing for a 5 percent savings yearly he needs 5.2 hectares. For the second group of this category the minimum is still higher, that is 8.8 hectares, when the savings allowance is included.

In this case, the minimum required credit for per hectare would be 1655 Rials which well below the first estimation. One of the reason for the low required capital per hectare is that it excludes the cost of irrigation which is fairly high. Assuming an even distribution of credit, 37 percent of it should be provided through traditional sources. The peasant savings can provide only 9 percent of the total requirement.

When an irrigated farm is considered, although the required capital per hectare is high, only 1.82 hectares of land would be sufficient for producing the minimum living earnings. With the 5 percent savings allowance, 2 hectare is needed²⁵. The productivity of land per hectare is higher than that of unirrigated land due to higher capital in use. Although the per hectare required credit is higher for the irrigated land than that of unirrigated, the minimum credit needed for survival is about the same for both. The family whose land is sufficient for the minimum consumption that is the lowest group has to be provided with about 15500 Rials which is still higher than that provided by the government.

The second and the third groups of households still need a higher credit to maintain their consumption. Respectively, they are to be provided with 26023 and 36096 Rials which are far higher than that of the first estimation. The government (including banking system) could provide only 35 percent and 25 percent of their needs respectively. Thus, around 70 percent of the required credit is to be sought from the traditional sources²⁶. It is important, because they account for about 70 percent of the families

under study, that is about 37.3 percent of the total rural family. It is also important, because most of the land holdings which could provide the minimum living standard come under these categories.

As table (3-11) shows that 45.1 percent of the holdings are under the minimum farm size. According to above calculation the peasants who are holding these farms live well below the subsistence level and the credit available to them cannot increase their productivity. It has to be considered that farming may not be the only channel of their earnings and there may not be a danger of serious starvation, because, probably, the peasants live in the rural areas do farming as a by product activity and self-sufficiency. One estimate shows that over 50 percent of the credit has been spent for consumption; it seems a large portion of it has to come from this group²⁷.

The group which can provide the necessary condition of the minimum consumption is the 2 to 10 hectares group which accounts for 38.6 percent of total farms under cultivation. Out of the total farms, 21.5 percent have to be irrigated to produce the minimum income²⁸. Thus, the total required credit would be far higher than that of first estimation if a higher productivity on land is to be achieved through higher irrigation of lands.

The above gives an idea of minimum size farm and the minimum required credit that the government has to provide. Based on our assumption of the peasant without means of production this minimum credit should be granted every year since the peasant saving is negligible. If the interest payment is taken into account, under the above circumstances, the peasant saving is almost out of question. Assuming the rate of interest paid to the money lenders to be around 18 to 30 percent and that of banking system about 6 percent, the farmers have to pay between 14 to 23 percent of their disposable income as the interest payment. Thus, contrary to Pyatt's argument, the peasant life is based on accumulated debt rather than minimum savings. Based on the even distribution of credit, if the government had provided the suffi-

cient credit enough to eliminate the money lenders, the peasants' incomes would have gone up by around 20 percent which may be regarded as higher rate of saving.

However, we have to drop our assumption of equal distribution of loans since it is more likely than not that those with a better credit worthiness would receive a large portion of their credit through banking system and the poor has to resort to the traditional supplier of funds. To evaluate the distribution of credit among different organization of production we will examine the pattern at disaggregated level.

3-2-3 Restructuring of Organization of Production

After the land reform and particularly since 1967 as a result of direct government intervention and its indirect assistance to the agricultural sector, four different organization of production have come to exist. Although all these organizations share the capitalist structure of production which distinguish them from the pre-land reform of feudalistic structure, they are widely different in their methods of production, ranging between the traditional method of cultivation to a highly capital intensive one. This different in the method of production has been created by government direct investment and assistance. On one hand, the government has emphasised the development of two newly established organizations of production with high capital intensive techniques, the agro-business and farm corporation. On the other hand, it has silently undermined the development of the traditional section of the agricultural sector which consists of co-operatives and private farming.

Taking into account that the traditional section accounts for about 95 percent of agricultural output, performance of agricultural sector is determined by the growth of the traditional section. Therefore, considering

the relative importance of the traditional section, the poor performance of the agricultural sector can be attributed to the over-emphasis of the development of the newly established organisation of production which accounts for 0.4 percent of agricultural output in 1973 and the undermining of the development of the traditional section in the government economic policy for agriculture. Below, we will examine the utilization of the DGI and government credit by these organizations of production and the importance of their performance in the development of agricultural sector. These organizations are: a) agro-business, b) farm corporation, c) co-operatives, d) private farming.

Agro-business

This organization is one of large-scale commercial farming run by foreign and local investors, largely for export. Since 1968 four ventures have been formed with foreign partners, Iran Shellcott, Iran California, Iran America and Iran International. The agro-business companies are located in the previous unirrigated land under the Dez dam held on 30 year leases. The area allotted to the companies is around 60800 hectares which accounts for 75 percent of net irrigable land under the Dez dam. Out of which, only 8200 hectares have been brought under cultivation during 1968-76, which is not more than 13.4 percent of the cultivatable lands in the area²⁹. However, these companies are highly specialized and their methods of cultivation are highly mechanized. They enjoy cheap loans as well as tax privileges from the government.

Although it may be too soon to evaluate the long term performance of agro-business, the available evidence shows that their future is rather gloomy and it certainly is not as bright as was expected. For various reasons which will be discussed later, the utilization of land has been delayed and with 0.2 percent share of the total land under cultivation in the country

one cannot expect important effect on the performance of the agricultural sector. The share of agro-business in the total agricultural output in 1973 hardly reached 0.2 percent³⁰. However, the disappointing performance is also clear from the per hectare output. If we compare the output in wheat production, that of agro-business may show a higher productivity per hectare than that of the national average (table 3-12). But, this is not the whole story since the national average also includes the wheat production from unirrigated lands which has a significant contribution. If we take the small plots which could be better irrigated or that of large lands which have irrigation facilities, we can see the agro-business output per capita is not significant. In some products, it even show lower productivity than the national average. Therefore, if the government's aim in encouraging such organization has been the raising of output, the above shows a disappointing result.

From the companies point of view, the performance of their activity can be evaluated by the rate of return or profitability. Based on this criterion, the land productivity may not be the only determinant although it can affect the profitability of the investment. The profitability is mainly determined by the labour productivity and the cost of production. It was believed that this method of cultivation would be successful and the internal rate of return would be higher than the national average or similar to that of the industrial sector. For instance, one of the companies, Iran Shellcott, expected to cover its cost of operation in four years and get a return between 10 to 20 percent³¹. However, practically, due to the following factors during 1968-75, three of the four companies have piled up losses believed to be at least \$ 5 Million and probably much higher³²:

- a) it is believed that the area of 19000 hectare is too large for one company to run without creating management and cultivation problems.
- b) The information provided by the Government research station proved inade-

Per Hectare Output Of Major Products By Different

Organizations of Production in 1972, 1973¹ and 1974

Table (3-12)

1973						1972		1974	
	Agro-Business (Irrigated)	Farm Corporation (Irrigated)	Farm under 10 Hectare (Area - Irrigated)	Farm over 5000 Hectare (area - Irrigated)	Country Average (Irrigated and Un-irrigated)	Less Than 1 Hectare	1 Hectare to less Than 2 Hectare	less Than 1 H ctare	1 Hectare to less Than 2 H ctare
Wheat	1971	1646	1419	1978	718	1857	1259	1593	973
Barley	1611	1682	1710	2182	699	1750	1176	1424	995
Beans	1748	963	1257	1421	1226	Note: 1- The Output per hectare by different organizations of production is only available for 1973. All figures for 1973 are related to per hectare output of irrigated land, except for the national average in which the share of un-irrigated is included . Figures for 1972 and 1974 are related to the total of irrigated and un-irrigated land per hectare output.			
Sun Flower	100	861	1592	613	654				
Cotton	1445	1242	1629	1877	1694				
Tomato	12754	13646	8229	2803	10235				
Alfalfa	4472	5173	4160	2983	3977				
Clover	2763	3690	2867	3515	3291				
Sugar Beet	33972	23767	18199	23773	24556				

Source: Plan Organization, Agriculture Censuses, 1972, 1973 and 1974.

quate. On the basis of very limited testing, decision were taken to plan large areas.

- c) Since the companies located on the lands previously run by small farmers, the workers(previously farmers) are reluctant to work for others on land which historically they regarded as theirs.
- d) Development costs, in particular land leveling, escalated beyond all calculations. Companies believe that the development costs are infrastructural cost which should be undertaken by the government.

Here, we are not concerned with all above factors. The last factor which is related to government investment and the cost of production may be considered in more detail. This factor which has created a long delay in the utilization of lands and thereby under-utilization of capital has been the main reason for the accumulated losses. In the calculation of the rate of return, the external costs which are to be undertaken by the government is excluded. In other words, if the government had taken the total external cost, the companies could have reached their planned internal rate of return. However, from the government point of view, one of the reasons for encouraging the large scale agricultural units has been that it was believed that these companies are able to accept a part of irrigation costs and land leveling. This lack of understanding about the social and private costs led the government to take over management of three of the four companies engaged in the agro-business through its Agricultural Development Bank (ADB) after the disaster in 1975³³. It may be possible for the agro-business to operate at a profitable level in the long run and to overcome the problem of cost and management. But all these will come about when the government has undertaken all the external cost of production. Having used wrong criteria for the evaluation of the projects, the government has failed to achieve its objective of raising the land productivity and lowering the cost to the government. It has also created an employment problem and has aggravated the income

distribution in the area.

The cost of encouraging and establishing the agro-business to the government has been far above what we consider as the minimum credit. The Agricultural Development Bank of Iran (ADBI) from the beginning has been contributing to this activity either through loan or share participation; in other words, it has been the main source of financing the agro-business companies. Table (3-13) shows that the share of agro-business in the total approved projects by ADBI in 1974 was as high as 42 percent. Thus, ADBI's contribution per hectare is not less than 38826 Rials in 1973 which is about 500 percent higher than the minimum required. As far as the effects of the DGI is concerned, the plan allocation has been about 15 to 18 percent of total allocation of agricultural sector (table 3-6). This has largely been for providing the large scale enterprises (including the agro-business) with sufficient water-supply for irrigation. Also, the cost of Dez dam construction which goes up to 5377 Million Rials for irrigation channels has to be considered as the government direct assistance to agro-business which has reduced the cost of irrigation for the companies involved³⁴. Altogether the DGI effect has been estimated to be around 2000 Dollar per hectare for development of lands and another \$ 1000 for irrigation and other expenses³⁵.

Taking into account the above external cost undertaken by the government, the agro-business companies may be able to operate at a profitable level in the future by some elaboration on the choice of product. The choice of product in particular can be important when the climatic conditions and the minimization of the cost of production are considered. In this respect, their promising future in sugar beet production should be seen as the result of the lower cost of production rather than higher productivity per hectare (for the pattern of production see table 3-21). However, whatever their chances of survival, their effects on the pattern of employment and distribution of income have been most damaging in these areas.

Approved Projects of the Agricultural Development Bank of Iran

In 1974

Table (3-13)

million rials

Type Of Activity	Number of Project	Previous Investment	Net Investment			Total	Percentage Share
			Applicant's Share	Loan & Equity Share Participation	Low Interest Loan & Free Grant		
Poultry Breeding	56	815	1686	3631	-	6132	19.9
Gardening	134	477	348	642	64	1531	5.0
Cow Breeding	37	331	309	1016	22	1678	5.4
Farming & Sheep Breeding	222	1637	766	2192	1190	5785	18.8
Agri - business	34	2430	4164	6328	15	12938	41.9
Other Activities	47	55	865	1851	2	2773	9.0
Total	530	5745	8138	15660	1293	30836	100.0

Source: BMI, Annual Report, 1974.

Around 6500 families were moved from the land to be allocated to the agro-business companies³⁵, out of which, the agro-business has employed only 40 percent³⁷. This has caused rapid migration. But as the government officials opposed to the establishment of agro-business argued, the employment in the future may even be lower. "... although in the past two years of drought many farmers have been able to find employment in construction work on some of the projects, the agro-business will never be labour intensive."³⁸ Therefore, if one considers the social cost of projects, it will be (in the case of agro-business) far above what is estimated by government direct investment and government assistance.

It is worth mentioning that the government decision about the establishment of the agro-business was opposed by many observers of the Iranian economy both from inside the government and outside it. Many of them recommended to the government the alternative of assisting the small and medium size farmers and leaving the initiative to the farmers themselves. In this respect, most reports have realized that the small and medium size farmers can increase their production if they receive the necessary biological inputs, irrigation facilities and sufficient credit. In cases where the above constraints have been removed, much higher yields have been achieved, even under a partial irrigation regime. Thus small, labour intensive farms, with the assistance of the present system of contractors of larger farmers, who provide machinery on hire to small farmers, are shown to be capable of achieving much higher yields, given the necessary inputs of modern technology and infrastructure, without the need to resort to large-scale reorganization and the introduction of large-scale mechanized methods³⁹.

Farm Corporation

After the second phase of the land reform, the government realized the problems of small farming; and this has led to the bringing of the small

lands under a farm corporation system. A farm corporation is run by an official manager while the shareholders work on the land collectively (although it is not required by the regulation, about 95 percent of the shareholders are engaged in working on the land) and receive their earnings partially through wage system and partially through dividends (a land owner's share depends upon the value of land and other elements, e.g. tools, he has placed at the disposition of the farm corporation). The method of cultivation is semi-mechanized and the large area under cultivation make the greater use of modern technique possible⁴⁰.

However, the farm corporation system covers only one percent of the total households engaged in the agricultural activity in the country. The land allocated to farm corporations has hardly reached 318.7 thousand hectares by 1976 which is less than 2 percent of the total cultivatable lands, out of which only 53.2 thousand hectares were brought under cultivation by 1972 (the planned areas to be cultivated by 1976 was around 130.3 thousand hectares) which accounts for about 30 percent of the allocated lands to farm corporations (table 3-14). With such a small area under cultivation one cannot expect any significant effect on the total agricultural output. The share of farm corporation in the total output was as low as 0.3 percent in 1973 (table 3-15).

One of the reasons for emphasising the establishment of farm corporations has been that it is believed the internal rate of return of this form of organization is above the national average. However, as we argued before, it may be a wrong criteria to evaluate the social cost of projects by the relative importance of the internal rate of return since this criterion does not reflect the importance of external cost of production which has to be undertaken by the society. If the rate of return of these corporations has been higher than average, it has not been because of better performance of per hectare output. As table (3-12) shows there is no significant difference

Status Of Farm Corporations

1968-76

Table (3-14)

	Unit	1968	1970	1972	1973	1974	1975	1976
Number Of Farm Corporations	-	15	19	43	65	65	85	89
Area Of Land	1000 Hectares	58.1	77.6	169.9	231.8	231.8	310.0	318.7
Land Under Cultivation	1000 Hectares	13.8	19.3	53.2	87.0 ¹	87.0 ¹	138.2 ¹	130.3 ¹
Population Covered	1000 Persons	43.2	55.0	134.3	196.4	196.4	290.8	299.7
Population Of Share Holders	1000 Persons	24.4	33.2	81.4	123.9	123.9	177.9	185.4
No. Of Share Holders	1000 Persons	4.3	6.2	15.3	22.8	22.8	32.5	33.7
No. Of Share, Individuals	1000 Units							
Government	1000 Units							
Noninal Value Of Capital Share	Million Rials	198	269	685	992	992	1381	1420
Credit : Subsidies	Million Rials	214	173	592	1234	2005	-	-
Loans	Million Rials	69	73	249	314	324	-	-

Note:1- Figures are estimated for the planned areas for cultivation during 1973-76 . The actual cultivated area for 1973 was not more than 56.0 thousand hectares.

Source: Plan Organization, Statistical Year Book, 1972-76.

Farm Production And Value By Organization Of Production In 1973

Table (3-15)

Items	Price Thousand Rials Per Ton	Farm Corporation (1)		Agro - Business (2)		Total Of Production (3) And Value In The Country		Ratio Of 1 + 2
		Production	Value	Production	Value	Production	Value	3
		(Ton)	('000) Rials	(Ton)	('000) Rials	1000 Tons	mil. Rials	%
Wheat	6.4	18699	119673.6	10721	68614.4	4545.9	29094.0	0.65
Barley	4.4	3176	13974.4	1676	7383.2	1157.8	5095.4	0.42
Rice	12.2	5387	65721.4	-	-	936.9	11429.9	0.57
Beans	20.7	125	2587.5	85	1759.5	48.1	995.3	0.44
Peas	24.1	86	2072.6	-	-	9.0	216.9	0.96
Sun Flowers	11.9	168	1999.2	9	107.1	58.2	692.2	0.30
Oil seeds	12.3	75	922.5	18	221.4	559.6	118.9	0.96
Cotton	18.3	1546	28291.8	815	14914.5	559.6	10241.2	0.42
Sugar Beets	1.1	43970	48367.0	42940	47234.0	4086.2	4494.8	2.2
Potato	6.6	512	3379.2	-	-	503.0	3320.0	0.1
Onion	4.4	179	787.6	118	519.2	205.1	902.4	0.14
Tomato	3.8	2545	9671.0	552	2097.6	284.7	1081.9	1.1
Alfalfa	3.5	2522	8827.0	4602	16107.0	1133.3	3966.5	0.6
Clover	3.6	2897	10429.2	807	2905.2	168.2	605.4	2.2
Grapes	41.7	2	83.4	74	3085.8	590.0	24604.7	0.01
Tea	21.3	-	-	-	-	61.3	1304.9	-
Pistachio	99.1	-	-	-	-	18.1	1789.3	-
Almond	30.2	-	-	-	-	0.1	3.4	-
Date	10.0	-	-	-	-	158.3	1583.3	-
Tobacco	0.5	-	-	-	-	16.8	8.4	-
Other	-	-	-	-	-	-	10072.2	-
Total At 1972 Pr.			316787.4		164948.9		111620.0	0.4
Total At 1973 Pr. ¹			348525.4 (0.27) %		181474.7 (0.13) %		128300.0	0.4

Note: 1- Percentages show the share of Farm Corporation and Agro-Business in The total.

Source: Plan and Budget Organization, Statistical Centre Of Iran, Results Of Agricultural Censuses of 1972 & 1973.

rence between per hectare of output of farm corporation and those of small lands which have been irrigated. Therefore, the higher rate of return is to be considered as the lower cost of production and better marketing facilities.

Their success has been largely dependent on the government assistance and the large area under cultivation. On average each household has received 10 hectares of land for cultivation although only one third has been brought under cultivation. The capital per household has been around 42000 Rials out of which a large share has been contributed by the government. Apart from the government share participation, in 1974, each household received 14000 Rials as a loan and another 88000 Rials as a free grant which altogether the cost to the government was around 146000 Rials per household. The cost of development of land for cultivation under the farm corporation system on average has been around 48000 Rials which is 600 percent higher than what we consider as minimum cost of production (see table 3-16). Despite the very high cost to the government, the farm corporation system suffers from two main weaknesses: First, dependence upon the ability and integrity of a single manager, with resulting management constraints for many large corporations. This deficiency is accentuated by the lack of financial incentives for the public management staff members and the lack of satisfactory alternatives for use of entrepreneurial and managerial talents of the previous farmers⁴¹. Second, these corporations have created a sort of uncertainty with respect to the alienation of the farmer from his land and his ability to reap the fruit of his own initiative and capability. One case shows that in the years of bad harvest during which the corporation ran at a loss and consequently farmers lost about half of their earnings, the farm corporation lost 50 percent of its members⁴². A repeat of such conditions may result in the take-over of the farm corporation by a few richer farmers.

With regard to the effect of farm corporation on the employment, as table

Capital Per House-hold and The Cost Per Hactare
To the Government For the Development Of Farm Corporations

Table (3-16)

	Rials						
	1968	1970	1972	1973	1974	1975	1976
Capital Per Household	46000	43000	45000	44000	44000	43000	42000
Subsidies Per Household	50000	28000	39000	54000	88000	-	-
Loans Per Household	16000	12000	16000	14000	14000	-	-
Total Capital Per Household	112000	83000	100000	112000	146000	-	-
Cost Of Development Per Hactare	35000	27000	29000	45000	48000 ¹	-	-
Share Of Farm Corporation In The Total Population Of The Areas	56.5 %	60.4 %	60.6 %	63.0 %	63.0 %	61.2 %	61.9 %

Note: 1- It is assumed that of areas allocated to farm corporations, 30 percent was cultivated land.

Source : see Table (3-14)

(3-16) shows, these corporations have usually employed between 56 to 63 percent of the total households in their areas; in this way as the agro-business they have created a large number of unemployed.

Rural Co-operatives

The government plan has been to integrate the small holders, whether affected by the land reform or not, under a co-operative system. The main objectives have been the provision and distribution of credit and the establishment of consumer co-operative shops. The rural co-operative system is to cover all the 3.2 Million farm families of the country. By 1976, a number of 2.9 Million has been brought under this scheme. The rural co-operatives are responsible for about 70 percent of agricultural output and accounts for the largest share of agricultural employment.

The rural co-operatives are highly undercapitalized; as table (3-17) shows the capital per household has hardly reached 2.4 thousand Rials by 1976. Also they have been ignored by the government, and no direct contribution (apart from what have been allocated through Plan Organization for establishment of co-operative required under the land reform act). or assistance have been granted to the co-operatives. The government has also discriminated against the co-operative with respect to subsidies in comparison to those given to the farm corporation (see pp.130-1).

The only government assistance to the co-operative has been a cheap loan through the Agricultural Co-operative Bank. The loan granted to each member or household hardly reached 6900 Rials in 1972 when the minimum credit required was not less than 15500 Rials. Although the per household credit has moved up to 14700 Rials by 1976 (table 3-17), there are two considerations which reduce the significance of the improvement: First, since the minimum required is estimated for 1972, we should take into account the rate of inflation during 1972-76 in order to be able to make such a compa-

Status Of The Rural Co-operatives

1963-76

Table (3-17)

	1963	1965	1968	1970	1972	1973	1974	1975	1976
No. Of Co-operatives	2722	5518	8388	8298	8261	2717	2847	2858	2886
No. Of Members (1000 Persons)	542	746	1260	1606	2065	2263	2488	2685	2868
Capital (million Rials)	369	673	1639	2379	3329	3857	4677	5690	6962
Capital Per Household (Rials)	680	880	1300	1481	1612	1704	1879	2044	2427
Credit Per Household ¹ (1000 Rials)	6.3	7.2	4.2	5.5	6.9	8.8	12.5	13.1	14.7

Note: 1- For the aggregate loans paid by the Agricultural Co-operative Bank Of Iran see Table . Here we have assumed the total loan granted by The Bank has been utilized by the rural co-operative. Thus, the credit per household can be over-estimated.

Source: Plan Organization, Statistical Year Book , 1972-76 and BMI, Annual Report, 1970-76.

risson. With such consideration, the minimum required for 1976 is about 22500 Rials (rate of inflation has been 45 percent during 1972-6)⁴³. However, this shows that the situation has slightly improved; while in 1972 the government provided only 44 percent of the required credit, in 1976 it was able to provide around 65 percent of the minimum fund required.

Secondly, as it has been estimated if farmers are to repay their loans on time, they have to receive another loan to cover their cost of production for the year after. In practice, since most of them have been unable to clear off their debt, the co-operatives as in the case of ADBI (see note 27) have granted loans on the stocks of paddy and the farmers have to pay the interest burden; in other words, the farmers never receive the loans. Thus, regular repayments as shown in table (3-18) should not be considered as the ability of farmers in repayment of their loans.

These are groups which rely heavily on the money lenders as the major source of money and due to their poor credit worthiness they have to tolerate an interest rate as high as 18 to 30 percent. It is hardly possible to talk about peasant savings under these conditions and it is not surprising that a large amount of loan has been spent on consumption.

Private Farming

Those farmers whose legal status were not affected by the land reform and are not member of co-operatives are classified as independent farmers. The size of their holdings ranged between 10 to 300 hectares. It is believed that their method of cultivation is reasonably mechanised and they account for 20 to 25 percent of the total value of agricultural output⁴⁴.

Those private farming which are mechanized seems to have a better credit worthiness than those of small farming under co-operatives, the other may have the same condition as the small farmers. It is not possible to work out the government assistance to the private farming but as the ILO delega-

Loans Granted By The Agricultural
Co-operative Bank Of Iran, 1963-76

Table (3-18)

Million Rials

Year	Number Of Loans Granted (1000)	Amount Paid	Amount Collected
1963	320	3427	1467
1964	603	4131	2089
1965	548	5480	3607
1966	250	5168	3943
1967	327	5188	5030
1968	352	5290	4521
1969	350	5415	5086
1970	212	8909	7765
1971	233	9582	9452
1972	263	14381	12179
1973	346	19993	14363
1974	414	31116	18536
1975	306	35295	27590
1976	327	42352	32413

Source: Plan Organization, Statistical Year Book, 1972-76.

tion found out the credit available to them is not sufficient.

3-2-4 Price Control and Import Policy

The government has tried to achieve two contradictory objectives through elaboration of price control and import policy. On one hand, it aims at raising the farmer's income by minimizing the price fluctuation of main agricultural products as a complementary policy to its subsidy and credit system. On the other hand, it has tried to stabilize prices of basic necessity in order to protect consumers in the urban areas through its direct price control and importation of agricultural produce⁴⁵. Reaching both objectives at the same time may need an integrated market in which the price mechanism can take care of the allocation of resources and where the organization of production operates on the basis of a capitalist structure and responds to the market signals with a minimum economic bottleneck. The Iranian economy with its fragmented market can by no means provide such essential conditions for successful government intervention in the market mechanism with the purpose of redistribution of income.

In order to explain why the above objectives under the prevailing conditions in the Iranian economy seems to be contradictory and why the government has failed to achieve its aim of raising of farmer's income, first, we will examine the structure of price control, second, we will look at the trend and importance of food importation and finally the effects of such policies will be discussed.

The government has intervened in price determination in three ways :

- a)- Those products whose prices are determined by an interministerial pricing board including tobacco, tea, sugar and oil seeds⁴⁶. These prices are determined basically upon the changes in the international markets, relative changes in the level of prices in the domestic market and the cost of production with the objective of increasing production of these crops. Although

the principles of price determination are the same for all these crops, the effects on the farmers' incomes are widely different from one kind to another, depending whether the domestic production is sufficient to meet the domestic consumption. For instance, in the case of tobacco which is the monopoly of the government and its production is sufficient to meet the domestic consumption, the price increase has usually lagged behind other products and the government officials are very inflexible with regard to bargaining against producers. In the absence of a market-price, we may rely on our experience of the south of Iran which indicates that the official prices are well below the existing black market prices (around 50 percent lower). Since the importation of cigarettes is prohibited, there is no link between domestic and international prices.

Another example is the price of sugar which is determined well above the international market. Since the cost of production of the crop is relatively high and the level of production is well below the national demand, the government has practically supported the production of sugar in the domestic market. However, it is the protection of sugar industries which has forced the government to consider the cost of production of the crop. Also with regard to the price stabilization the government has increased its subsidies for sugar production which has been estimated to be around 21,404 Million Rls. in 1976. (table 3-19). The annual losses which are born by government-sugar factories are due to the under utilization of capital as a consequence of insufficient inputs i.e. sugar beet. Taking into account the fact that the price of sugar is established above the international markets and that the sugar industries have always been protected by the government protection policy, the losses do not reflect under pricing. In fact it indicates that the government subsidy should have benefited the producers of sugar beet. However, although the government's policy with regard to control of prices has made the production of sugar beet possible⁴⁷, it does

Budget Subsidies to Input and Output of Agricultural
Products

Table (3-19)

Million Rls.

	1969	1970	1971	1972	1973	1974	1975	1976
1- State Cereal and Sugar and Tea Organization	610	655	939	771	4923	25333	36421	35473
Cereal	(610)	(655)	(939)	(771)	(3205) ¹	(11698)	(15278)	(14069)
Sugar	-	-	-	-	(1718)	(13635)	(21143)	(21404)
2- Meat Organization	105	238	339	241	2381 ²	4709	- ³	7431
3- Central Organization of Rural Cooperation	322	524	505	1094	1694	2521	2640 ⁴	2681
4- Fertilizer Company	-	-	300	200	-	7 ⁵	7861 ⁶	6497
5- Foreign Trade Company	-	-	-	-	-	7500 ⁷	13500 ⁷	-
Total	1037	1417	2083	2306	8998	40070	60422	52082

Notes: 1- Includes 831 Million Rls. payments related to 1971 and 1972.

2- Includes 15 Million Rls. redisbursement of custom duties and 150 Million Rls. losses related to 1971 and 1972.

3- There has been a contribution of 5219 Million Rls. by the general budget (see No. 6)

4- Includes 17 Million Rls for the compensation of losses of purchase and sale of date in Provinces of Sistan and Baluchistan.

5- Paid by the Ministry of Agriculture and Natural Resources for adjustment in prices of chemical fertilizers.

6- Contribution by the general budget to Fertilizer Company (Distribution Section) for purposes of market adjustment.

7- Compensation for the loss in the value of purchase and sale of imported rice and vegetable oil.

Source: Budget Acts 1970-77.

not mean that the small farmers have benefited from the high price paid by the sugar factories. There are two reasons which may explain why the income of those farmers who grow sugar beet may not have grown sufficiently and the government policy may not have been successful to encourage the production of this crop. First, since a significant share of domestic sugar consumption is provided through imports, the price of sugar has largely been affected by changes in the international markets and with respect to price stability in the domestic market. This reduces the possibility of raising price for this crop and transferring the cost of production to consumers. Secondly, the high price paid by sugar factories does not mean a high disposable income for the small farmers because the cost of collection accounts for a large percentage of the production cost. Since the small farmers have to hire the service for collection of the crop, this should be considered as the cost to the small farmers rather than their value added to the production. One research on the cost of sugar beet in the Province of Fars shows that after the land reform, peasants have been reluctant to grow this crop due to its high cost of collection despite the relatively high price paid by the sugar factories⁴⁸. On the part of large-scale agricultural units, the collection is a part of their value-added and therefore the high price may encourage the production of this crop.

b)- There is a wheat pricing policy which attempts to stabilize price, with government prepared to buy and sell at pre-announced prices⁴⁹. The government has tried to use its price policy as a floor in order to protect the farmers. However, in practice, either the prices announced by the government have been lower than those of market prices, or the insufficient fund makes any significant intervention impossible. The insufficient fund not only does not allow the Cereal Organization to purchase more than 10 percent of the wheat which cannot affect the market prices⁵⁰, but more importantly, 80 centres of Cereal Organization are not able to cover the whole

fragmented market of the country⁵¹. Also, the cost of transportation of wheat to the centres has to be born by farmers themselves. These factors add to the problem of low official prices and force the farmers to resort to their traditional middle-men. The farmer middle-man relationship is also strengthened by the fact that middle-men are also one source of money supply in the rural areas who usually buy the farmers production in advance. Therefore, it is not surprising to see that farmers sell their wheat at some 30 percent lower than the nominal minimum price⁵². Taking into account the fact that the official price has hardly changed within a year or between years⁵³, one may assume that over a period of time the floor-price may become a ceiling price above which the middle-men would be reluctant to pay, and government intervention practically will do more harm than good in the long-run. However, the government subsidies have rapidly risen from 655 Million Rls. in 1970 to 14,069 Rls in 1976 (table 3-19). Taking the above factors into account and that the demand for wheat is price inelastic, it is the consumer that benefits from the subsidy rather than the farmers.

c)- Aiming at keeping prices of food low, the government has determined the prices of meat, eggs and dairy. The government price policy with regard to these products has been accompanied by continuous importation of these consumer products. These products have also been subsidized through Budgetary allocation. For instance, the Meat Organization is charged with supplying meat to Tehran, in the case of shortages to other cities. The amount of the subsidy has risen from 238 Million Rls. in 1970 to 7431 Million Rials in 1976 (table 3-19). Whether the farmers have benefited from the subsidies or not is hard to explain. However, there are two factors which should be considered in this respect: First, to the extent that the demand for meat is price elastic, it is the farmer, domestic or foreign, who benefits from the subsidy. The larger the share of imports, the higher the benefit to foreign producers which has been the case since 1973. Second,

since the middle-men play an important role in matching the supply and demand for meat, it is reasonable to assume that the real beneficiary of the subsidy is the merchant rather than the farmer in a fragmented market like Iran. Therefore, the subsidy may benefit neither the consumer nor the producer, but rising the profit of merchants involved. Not only the government policy may have little effects on the growth of production in the domestic market, but also, the government liberal policy with regard to imports may have created disincentives with regard to animal breeding. Altogether, the total cost of the subsidy to carry out the government price policy with regard to agricultural products to the government has risen along with the appearance of inflationary pressure during the 1970's from 1,417 Million Rls. in 1970 to 53,082 Million Rls. in 1976(table 3-19).

Although the government has left the price of other products to be determined in the market, its generous and liberal import policy with regard to consumer goods and particularly food products should be interpreted as zero protection for the agricultural produce.

The above structure of price control shows that the government has not been able to influence the farmers income. Its intervention, in the main, has been in favour of consumers rather than producers. In this respect, the oil revenue has opened the opportunity to the government to pursue a price policy which has ensured low consumer prices, despite the growth of food consumption far above the domestic production. If the economy had been confronted with a serious foreign exchange constraint, like other developing countries, it could have influenced the agricultural prices and created the necessary incentives for the agricultural producers. The oil revenue has allowed the government to increase the food imports during 1966-70 at a rate of 1.7 percent and during 1970-76 at a rate of 52 percent which is more than 900 percent higher than that of domestic production(table 3-20). In pursuing a price policy as pictured above, one has to also consider the importance

Imports Of Food Stuffs During 1966-76 ¹

Table (3-20)

Million Dollars

Item	1966	1970	Item	1970	1973	1976	Ann. Gr. Rate 1970-76
Live Animals & Animal Products	10.7	30.0	Foods & Live Animals	68	327	1182	60.9 %
			Dairy Products & Eggs	(10)	(32)	(118)	
Tea	11.1	9.3	pluses & their Products	(6)	(113)	(327)	
Sugar & Sweets	17.3	7.2	Sugar, Its Derivatives & Honey	(7)	(76)	(243)	
Wheat & Wheat Flour	17.0	2.3	Tea, Coffee, Chocolates & Other Similar Products	(13)	(19)	(43)	
Fats, Fluid Oil & Other Derivatives	29.1	42.4	Fruit & Vegetables	(3)	(21)	(152)	
			Others	(29)	(66)	(299)	
			Beverage & Tobacco	1	5	77	106.0 %
			Vegetable & Animal Oils	42	59	137	22.0 %
Total	85.2	91.2 ²	Total	111.0	391.0	1396.0	52.0 %

Note: 1- Up to 1970, Foreign Trade Statistics do not show the international classification for food stuffs. In order to make such comparison possible, two different classifications have been used for the 1966-70 and 1970-76 periods. The first period consists of major items of food imports which approximately accounts for 82 percent of food imports as shown in the second period.

2- Annual growth rate for 1966-70 is 1.7 per cent.

Source: BMI, Annual Reports, 1970-76

of political factors. It may be true that the Iranian bureaucracy is very inefficient for which the intervention in an imperfect and fragmented market is a highly sophisticated duty, but, mainly the government has not been concerned with the raising of farmers income and it should not be considered as an aim in the government price policy. In fact, the government intervention in the market mechanism arises from its intention to attract the support of urban areas and particularly the petty bourgeois fraction of the society. This is the political nature of the Iranian state which determine the aim of its economic policy. Since the peasantry has not politically been able to influence the state structure, his economic interests have been overshadowed by that of urban petty bourgeoisie on which the state has relied on.

Conclusion

With regard to the effects of the government spending in the agriculture sector one can say that this sector usually suffers from the relative low productivity. But, in case of Iran, the growth rate of agricultural products has been low not only relative to those of other sectors but also relative to the population growth rate. This has been largely due to the distribution of land into under economic units and the lack of capital formation.

To overcome the problem of financing and small farming, the government has tried to bring them under different organization. But it has followed a broad policy rather than a specific one through a development plan. This policy with the aim of higher output resulted in the concentration of the government funds in highly mechanized agricultural units including agro-business, farm corporation and the private large - scale units. They have been in the position not only for using the large government credit but also to utilize the direct government investment in the agricultural development and the irrigation.

This policy has left out the majority which is responsible for about 85 percent of the total agricultural output with unsufficient funds. This majority still have to resort to the traditional source of finance and thereby lose a large part of their economic productivity on interest payments. The lack of capital formation, the back-wardness of their method of cultivation and under-economic size of farming of this majority have reduced the possibility of raising productivity in the agricultural sector. And the government's policy not only has not improved their condition, but with the concentration on the large scale units has deteriorated the competitive position of small farmers.

Overall, the agricultural sector has not received the deserving atten-

tion; however, the large-scale agricultural units enjoyed the large share of the government assistance. Since these large units produce only a small portion of the total agricultural output, even if they had a good performance, its effect on the total output would be insignificant. In this case, the government credit policy resulted in the change in factor proportion used and thereby a change in the employment situation and the distribution of income.

With regard to price and import policies, the effects have shown a complete failure in supporting the farmers but some success for consumer protection. Despite the announced objectives of the government policy, the intervention of the government in the price mechanism has been determined by the political nature of the state and has been eased by the availability of oil revenue. The government policy with regard to price control has aggravated the lack of incentive and the capital formation in the agricultural sector, whose performance has been poor by any criteria.

Appendix A

Cost of Compensation of Landlords

The cost of implementation of the land reform for the government is not clearly understood. The 1961 law granted the Ministry of Agriculture the right of acquisition of land from landlords by making payments in cash and instalments at the level worked out by the formula (a coefficient was determined according to the tax payments). The Agricultural Bank on behalf of the Ministry of Agriculture granted a 6 percent on the order-payments which was due to pay in ten yearly instalments (in the second phase the yearly instalment was extended to 15 years)⁵⁴.

In the first phase of the land reform, it was obvious that first the government had to pay the landlords the value of land and it could claim an equal amount from the peasants who received the land in fifteen yearly instalments. Thus, theoretically, the only burden on the government was the payments of interest to the landlords. However, in practice, since there was a lag between outlay and income due to the different yearly instalments, the government had to bridge the gap. Moreover, the Agricultural Bank preferred to increase the cash payments when the interest rate on loan was low. Table (3-21) that the average cash payments was about 25.8 percent of the total purchased land values.

By 1977, the value of land purchased by the government under the first phase of the land reform legislation reached an amount of 13375 Million Rls., out of which 3456 Million Rls. was paid in cash. However, the figure for after 1970, due to the correction made by the Ministry of Co-operative and Rural Affairs, is rather confusing and it is not possible to work out the exact amount payable. But, one thing is certain that the burden would be equal to the value of purchased land plus the interest paid on the order payments when whole commitment was fulfilled. A rough estimate can be made which

Purchase Cost, Interest Repayments By 1977

In the First Phase of Land Reform

Table (3-21)

Million Rials

Year	Cost Of Properties 1	Cash Payment As The First Instalment 1	Payment Orders Fallen Due 2	Interest Payment On Payment Orders 2	Instalments Are To Be Paid By Recipients 3	Instalment Actually Paid
1962	3339	338	-	-	222.6	18
1963	1716	223	333.33	19.99	337.0	78
1964	1178	426	439.99	46.39	415.5	89
1965	1795	1305	492.36	76.00	535.2	121
1966	1000	547	528.68	107.72	601.2	182
1967	231	73	561.03	141.39	617.3	-
1968	317	64	572.31	175.74	638.4	-
1969	292	60	590.38	211.11	657.8	-
1970	- 86	79	606.95	247.54	652.1	-
1971	- 158	- 11	606.95	283.95	641.6	-
1972	630	- 116	273.62	120.39	683.6	-
1973	96	139	273.62	136.81	690.0	-
1974	82	- 8	273.62	153.22	695.5	-
1975			273.62	169.63		-
1976	2943	336	273.62	186.06	891.7	-
1977	-	-	273.62	202.46	-	-
Total	13375	3456 ⁴	6830.03	2623.33	8280.2	488

Notes: 1- The (-) indicates the correction made by Ministry of Co-operatives and Rural Affairs.

2- The instalments are related to lands purchased by 1970. The interest payments are related to the lands purchased by 1970.

3- The total indicates the instalment to be paid by 1970. The accumulated repayment by 1972, was equal to 5341.4 Rials.

4- On average, the cash payment account for 25.8 percent of total value of land.

Source : BMI, Annual Reports , 1970 and 1971 ; Plan Organization, Statistical Year Book; Denman, D.R., The King's Vista, Table 17, P. 184.

shows that the government has paid about 13,834 Million Rls. by the beginning of 1977 (table 3-21).

The up to date figure for the amount received by the government is not available. However, according to Denman, the total repayment received by 1972 was around 500 Million Rls.⁵⁵ while the government outflows was 6698 Million Rls. If the peasants who received lands had paid their commitment on due time they would have paid about 5341.1 Million Rls.(table 3-21). The gap between theory and practice is about 91 percent. It seems this has to be accepted as the national burden of the land reform⁵⁶.

The government burden for the second and third phases was not as serious as the first phase since its commitment was limited to one third of the purchase price of lands divided under these phases. An estimate shows that the debt for the second and third phase is about 19224 Million Rls. of which a substantial burden is carried by the government⁵⁷.

The above shows only the financial effects of the reform and the cost of legitimate alienation of land from landlords to peasants. But its economic effects depend upon how it has affected the money supply and how it has been absorbed in the economy. As far as the former is concerned, since the land reform bonds were discountable, it had some effects on the money supply. But its final effect depends on the extent to which control of money supply matters to the government. If it does matter, then the only way the government could find such a sum without printing money would be to do what it had habitually done when it needed money it did not have: divert the oil revenue.⁵⁸ In either case the compensation of the landlords was made against the large existed possibilities for investment in the economy. At any rate, this compensation could not be regarded economically useful unless it was invested in productive sectors.

Our knowledge about the absorption of the compensation money is little. However, according to Denman about 5.5 percent of value of the land purchased

was invested in the government-owned factories; and another 4.4 percent was traded with the government to pay off taxes⁵⁹. Probably a high portion of the compensation money has been transferred to financing urban residential development and family commercial enterprises; and a considerable proportion has left the country for investment abroad⁶⁰.

Appendix B

Estimation of Minimum Required Land and Credit

To estimate the minimum required credit, we can calculate the cost of an unirrigated land under wheat cultivation as follows, assuming the minimum cost is the minimum required credit. Data on the cost of hired tractor and combine has been taken from A.H.Hekimi and Nehrir⁶¹ for the Province of Fars in 1968 which has been inflated according to the agricultural inflatory index for 1972.

Cost of Production Per Hectare in Province of Fars

	1968	1972
Cost of Ploughing	400	510
Cost of Disking	200	255
Cost of Harvesting	12 to 15 percent of value of harvested crop	533.2 (unirrigated land)

The figure for output and cost of seed has been taken from Plan Organization⁶² for Province of Fars in 1972.

Cost of Seed and Per Hectare Output
For Irrigated and unirrigated
Land

Land	Area Under Cultivation (,000) Hectares	Input (Seed) (000) Tons	Output (,000) Tons	Per Hectare Output (Kg)	Value at Harvest Price (ten Million Rls)
Irrigated	162	209	252	1549	148
Unirrigated	150	100	99	664	53

From the above table we would have the following costs for one hectare unirrigated land:

Cost of Seed	357.0	Rials
Value of Production	3554.4	Rials
Cost of Harvest	533.2	Rials

Therefore,

$$\text{Total Cost} = 510 + 255 + 533.2 + 357.0 = 1655.2 \text{ Rials}$$

Assuming the farmer receive his income in the form of profit, thus, we would have:

Net Profit Per Hectare	=	Value of Production Per Hectare	-	Cost of Production Per Hectare	
Or					
Net Profit Per Hectare	=	3554.4	-	1655.2	= 1899.2 Rls.

If farming is his main job, the farmer will try to maximize his income by choosing the crop or any other work with lowest cost⁶³ (assuming his credit worthiness is very poor) and the highest income. Thus, the maximum possible earnings would be two harvests a year, assuming wheat product is his main cultivation then we would have:

Net Profit Per Hectare Per Year	=	Net Profit Per Hectare	X	Number of Harvest	
	=	1899.2	X	2	= 3798.4 Rls.

With the minimum consumption less than 2000 Rls. per month, on average 1505.6 Rls., the farmer would spend 18067.7 Rls. yearly. Thus, the minimum required land to cover its consumption would be:

$$\text{Minimum Land} = \frac{\text{Consumption}}{\text{Net Profit Per Hec-}} = 18067.7/3798.4 = 4.8 \text{ Hectares}$$

tare Per Year

In the absence of the data on the cost of irrigation, we assume the difference in the productivity of land (irrigated and unirrigated) can be attributed to higher capital in use for irrigation. Thus, the land productivity ratio would give us the output coefficient of irrigation that is P_i/P_u = Output Coefficient of Irrigation while P_i is the productivity per hectare for irrigated land and P_u is that of unirrigated land. Here, we have

$P_i/P_u = 1549/664 = 2.33$. Although we could assume the marginal cost of production is equal to the average cost of production, it is accurate to use the above coefficient only as the output coefficient of irrigation, since the coefficient for non-irrigation capital can be worked out from the rate of return of unirrigated land.

To calculate the output coefficient of non-irrigation capital (m'), we would have the value of output per hectare (V_u) is equal to the cost of cultivation of unirrigated land (C_u) multiply (m') :

$$V_u = m' C_u \quad \text{Or} \quad m' = V_u / C_u \quad \text{Or} \quad m' = 3554.4 / 1655.2 = 2.15$$

Having the value of output for one hectare of irrigated land, the mathematics for the minimum land required would go as follow:

$$V_i = m C_i + m' C_u$$

While V_i is the value of output per hectare for irrigated land

m is the output coefficient of Irrigation

C_i is the cost of irrigation

$$\text{Thus, } 9097.3 = 2.15 \times 2496.9 + 2.33 C_i \quad \text{Or} \quad C_i = 1600.4 \text{ Rls.}$$

$$\text{Total cost} = 1600.4 + 2496.9 = 4197.3 \text{ Rls.}$$

$$\text{Net Profit Per Hectare} = 9097.3 - 4197.3 = 4900.0 \text{ Rls.}$$

with the given consumption, the minimum land would be $18067.7/4900 = 1.85$ hectare. Assuming the farmer has no means of production (except land and labour) and savings, the minimum required credit (K) would be equal to the cost of production.

$$K = (\text{Cost of Production} \times \text{Minimum Land}) \text{ Number of Harvest Per Hectare}$$

$$K_u = (1655.2 \times 4.8) \times 2 = 15889.5 \text{ Rls.} \quad \text{While } K_u \text{ is credit for unirrigated land}$$

$$K_i = (4197.3 \times 1.85) \times 2 = 15530 \text{ Rls.} \quad \text{While } K_i \text{ is credit for irrigated land}$$

Table (3-10) has been calculated as above for different groups of consumption.

Note

- 1- Colman, D. and Nixon, F., Economic of Change In Less Developed Countries, Philip Allan, 1978, P.143
- 2- Sen, A.K., Choice of Techniques, Oxford, 1975, PP. 81-82.
- 3- Ibid., P. 83.; For the case of Iran see Kaneda, H., Agriculture, Mission Working Paper, No. III, Employment and Income Policies For Iran, ILO, February 1973, PP. 4-6.
- 4- Looney, R.E., Economic Development of Iran, Preager, 1973, Appendix A. ; Graham, R., A Most Troublesome Experiment, Financial Times, Friday 21, September 1976.
- 5- The Third Plan's frame which had been prepared before the event of the land reform had to be scrapped when the time came for its application. See Baldwin, G.B., Planning and Development in Iran, The Johns Hopkins, 1967, P. 93.
- 6- Plan Organization, Third Development Plan, Final Report, December 1970, P.22.
- 7- For instance, during 1960-3, due to the land reform, the investment in the large-scale mechanized farming in the Province of Fars decreased despite the fact that the mechanized farm was not to be affected by the land reform. See Hakimi, A.H., Nehrir, H. and Eghbal, K., Farm Mechanisation in Iran, University of Reading, Department of Agriculture, Study NO.8, October 1969 (mimeo.). The same event has been observed by Okazaki Shoko, (in the case of region of Gorgan), The Development of Large-Scale Farming In Iran: The Case of the Province of Gorgan, The Institute of Asian Economic Affairs, Occasional Paper Series No. 3, Tokyo 1968,
- 8- Plan Organization, Third Plan, Op.cit., P. 24.
- 9- Ibid., P. 22.
- 10 For the subsidies, see Aresvik, O., The Agricultural Development of Iran, Preager, 1976, P. 204.
- 11 Plan Organization, Statistical Year Book 2536 (1976-7), P. 242, Table 54.
- 12 For the different choice of techniques in the agricultural sector and their effects on the labour and land productivity see, Sen, A.K. Op.cit., PP. 81-88.
- 13 Colman and Nixon, Op.cit., P. 147.
- 14 Aresvik, O., Op.cit., P. 203.
- 15 Kaneda, K., Op.cit., P. 32.
- 16 Ibid., P. 32.
- 17 Plan Organization, Results of Agricultural Survey, Second Phase (2533), (1974), P.(SH).
- 18 Kaneda, K. Op.cit., P. 35
- 19 Also, there is another additional cost of about \$ 1000 per hectare for making the land ready for planting, leveling and construction of field channels and roads which was to be undertaken by the farm operators. See, Mehran, G., Agro-business Opportunities in Iran, June 1970, Tehran (mimeo).
- 20 Kaneda, K. Op.cit., P 34.
- 21 Aresvik, O., Op.cit, P. 203.
- 22 Plan and Budget Organization, Fifth Development Plan, 1973-78, Summary, P. 39.
- 23 Katouzian, M.A., Land Reform In Iran, Journal of Peasant Studies, Vol.1. No.2, January 1974, P. 233.
- 24 Pyatt, G. Methodology For Macro-Economic Projection, Working Paper XII, ILO, Op.cit.
- 25 Since the productivity of land and possibility of irrigation are widely

- different from one region to another, our estimation of minimum land may not be realistic for some of regions of the country. However, other studies have found a similar minimum land level which provides a rural family with a minimum consumption diet. For instance, Shoko Okazaki has estimated that 2 hectares of land is sufficient to provide a rural family of six in the Caspian Sea area with a minimum consumption. Okazaki, S., Shirang-Sofla: The Economics of a Northeast Iranian Village, Developing Economics, Vol. VII, No. 3, 1969, P 272. An IBRD report estimated the average farm size capable of providing a net return of 75000 Rls. per year to range from 4 to 10 hectares for 'perennially irrigated' lands and 10 to 30 hectares for 'dry land' depending on the cropping patterns chosen, Kaneda, K. Op.cit., P.29. The difference between our estimation and that of the IBRD is the level of income chose for the determination of the minimum land size. The IBRD's estimation is almost the average consumption level in the rural areas, but, our estimation is well below the average ranging between less than 24000 up to 48000 Rls. per year. Another study indicates that except in the Caspian Sea area, less than five hectares is not sufficient to provide a peasant family with more than subsistence livelihood. Hooglund, E.J., The Khuzhishin Population of Iran, Iranian Studies, vol. VI, No. 4, Autumn 1973, P. 233.
- 26- Our estimation is not far from the reality. Table (3-22) shows the average loan obtained by each family and the sources of loan for few Provinces. The average ranged between 7350 to 23156 Rials. For instance, Garmzar with an average loan of 15474 Rls. shows the money lender as the major source of loans, about 58.5 percent.
- 27- On my own experience of the south of Iran, I can say that most of credit granted through Agricultural Bank of Iran went to those whose land were under economic size. They spent their credit entirely on consumption without considering the possibility of repayment. On other words, living on subsistence level led them to argue that they had nothing to lose but their chance of better consumption although temporary. On the time of repayment, Agricultural Bank realized that the situation was critical and let the peasants to clear off their debt with a new loan. However, the peasants had to pay the delay charge which was at a rate of 12 percent that is twice of the interest rate on the original loan. The bank had to repeat its policy each year; and finally it accepted the loans to be repaid in a longer instalments and free of interest charge. Also, Hadi Shame Zandjani has found that only 48 percent of the borrowed money was used for agricultural purposes, the rest helped to finance the acquisition of domestic consumption goods. In the south, namely in Bander Abbas, similar investigation in 1987 (1346) revealed that 30 percent of credit obtained by farmers in the sample helped their ordinary consumption., Zandjani, H.S., Allocation of Resources Under Agrarian Reform in Iran, Ph.D Thesis, Cambridge, 1973, P.121. Also, See Katouzian, Op.cit., P. 233.
- 28- In practice, also, the ratio of irrigated land relative to unirrigated lands for the holding under 5 hectares is higher than the average; see table(3-23).
- 29- Graham, R. Op.cit.
- 30- Since there exists no estimation for the share of agro-business and farm corporation in the total agricultural output, table (3-15) provides an approximate estimation of the value produced by these two organizations. The production is related to 1973 and prices to 1972. Thus, in order to adjust the price differences, the estimation has been inflated by the rate of inflation in the agricultural sector. Thus, the figures for farm corporation and agri-business in 1973 are 349 Million Rls. and 181 Million

Source Of Credit To Village Families¹

1968

Table (3-22)

Rials

Regions	Average Loan Obtained By Each Family (Rials)	Percentage From				
		Co-operatives	Agricultural Banks	Other Banks	Land Owners	Money Lenders
Qasr-e-Shirin	15076	43	13	0.5	-	43.5
Sanandaj	12739	39	18	-	0.6	42.4
Golpayegan	23156	19	29	9.0	0.4	42.6
Germasar	15474	37	3	1.5	-	58.5
Sari	19580	31	6	11.0	0.9	51.1
Hamadan	13238	45	4	7.0	0.1	43.9
Birjand	7350	41	20	-	0.4	38.6

Note: 1- Money- Lenders operate at rate 18 to 30 percent. Co-operatives operates at rate 6 percent.

Source: Denmass, D.R., The King's Vista, P. 201, Table 20.

Distribution Of Land Under Cultivation of
Annual Crops By Size and Type in, 1971

Table (3-23)

(1000) Hactares

	Less Than 1 Hactare	1 to 2	2 to 5	5 to 10	10 to 50	50 to 100	100 and over	Total
Irrigated (1)	12	20	48	56	92	14	50	294
Un-irrigated (2)	3	11	62	128	288	22	36	551
Total	15	31	110	184	380	36	86	835
Ratio (1)/(2)	4	1.8	0.77	0.44	0.32	0.64	1.4	0.53

Source: Plan Organization, Agricultural Census, 1971, p.3.

- Rls. respectively which accounted for 0.27 and 0.13 percent of the farming output.
- 31- Field, Michal., Agro-business and Agricultural Planning in Iran; World Crops, March/April 1972, P. 69.
 - 32- Graham, R. Op.cit.
 - 33- Ibid.
 - 34- Although the agri-businesses pay for water rent, a substantial cost of Irrigation channels has been undertaken by the government and it is not included in the water rent; see Plan and budget Organization, Fifth Development plan, Op.cit., P 45.
 - 35- See note 19.
 - 36- Graham, R., Op.cit.
 - 37- ILO, Employment and Income Policies For Iran, Geneva, 1973.
 - 38- Field, M. Op.cit., P 71.
 - 39- Bookers Agricultural and Technical Services Ltd. and Hunting Technical Services Ltd., National Cropping Plan, Interim Report, Vol.I. Tehran, 1975.
 - 40- Freivalds, John., Farm Corporation In Iran: An Alternative to Traditional Agriculture, Middle East Journal, Spring 1971.
 - 41- Aresvik, O., Op.cit., P.118.
 - 42- Field, M., Op.cit., P. 71.
 - 43- BMI, Annual Report and Balance Sheet, 1976.
 - 44- ILO., Op.cit., P 42.
 - 45- Plan and Budget Organization, Fifth Development Plan, Op.cit., PP.4-5.
 - 46- Aresvik, O., Op.cit., P 208.
 - 47- Due to the rising of production of sugar in the domestic market, the import of sugarcane declined from 59.1 Million Dollars in 1964 to 7.2 Million Dollars in 1970; BMI, Annual Report, 1970, table 27, P.135.
 - 48- One study shows that "... average cost of growing, thinning, harvesting and transporting are 19619 Rials per hectare under cultivation of sugar beet, which there could only be 20000 Rials income per hectare;...." In comparison with other products, this study has found that "... the income from the sugar beet or even cotton could be far higher than sun flowers, but it should be taken into consideration that the expense for planting picking up sun flowers is less than the others." Hakimi, A.et.al, Op.cit., PP. 28-9.
 - 49- Kaneda, K. Op.cit., P. 42.
 - 50- Ibid., P. 43.
 - 51- Aresvik, O., Op.cit., P 209.
 - 52- Kaneda, K. Op.cit., P. 43.
 - 53- Whenever the price announced by the government has risen, it has been due to the impact of inflationary pressure in the international market. For instance, in 1974 when the inflationary effects of the increase in oil prices had influenced the price level in domestic and international markets, the government raised the prices of wheat and barley from 6000 and 4000 Rls. to 10,000 and 7,500 Rls. per ton respectively. Taking into account that the harvest prices of wheat and barley were 6,400 and 4,480 Rls. per ton in 1972, it indicates that the prices announced by the government during 1972-4 were lower than those of the market prices. For 1974 figures, see BMI, Annual Report, 1974, P. 78. ; For 1972 figures see Note 30.
 - 54- Lambton, A.K.S., The Persian Land Reform 1962-66, Charendon Press, Oxford, 1969, PP. 72-77 and P. 106.
 - 55- Denman, D.R., The Kings Vista, 1973, P. 268.
 - 56- The Budget Act 1973-74.

- 57- Denman, D.R., Op.cit. pp. 266-67.
- 58- Baldwin, Op.cit., P.95.
- 59- Denman, Op.cit., P.267
- 60- Ibid., PP. 267-8.
- 61- Hakimi, A.H. et al, Op.cit., P. 36.
- 62- Plan Organization, Results of Agricultural survey, 1351 (1972), tables (32 and 33), PP. 28-9.
- 63- See Note 48.

Chapter Four

4 Development of Industrial and Mining Sector in Iran

Introduction

Since 1959 the industrial sector has been the most dynamic sector of the economy; its share in the GDP increased from 19 percent to 30.8 percent in 1976 at constant prices (figure II-1). Also, a large share of the labour force has been absorbed by this sector. As mentioned earlier (table II-5), the share of the industrial sector in the total employed labour force has risen from 20.1 percent in 1956 to 26.3 percent in 1976. However, there exists no conformity between the pattern of output and employment with regard to their share in the total output and employment. This non-conformity has created a change in the relative sectoral productivity of this sector in the sense that the productivity in this sector shows a higher rate of growth than that of the national average. This has been the consequence of the higher capital formation and the better utilization of the existing capacity. At the same time, this pattern indicates the structural change which the industrial sector has undergone during the 1959-76 period.

However, not all components of this sector contribute at the same rate to the growth of the Industry and Mining sector. The available data for 1972-76 shows that the share of the Mining sub-sector in the total value added of this sector has never been more than 3.2 percent (table 4-1). This indicates that the industrial sub-sector has been responsible for the major contribution to the development of the Industry and Mining Sector. Therefore, it is the structure and the pattern of development of this sub-sector which determined the performance of the Industry and Mining Sector.

The industrial sub-sector consists of manufacturing, construction

Distribution Of Value Added in Industry and Mining

For Selected Years

Table(4-1)

At Constant Prices

Percentage

	1959	1964	1968	1970	1973	1974	1975	1976
Manufacturing and Mining (1)	68.2 -	68.3 -	69.1 -	69.9 -	72.1 (2.1)	70.6 (1.9)	68.6 (2.2)	64.0 (3.2)
Construction	29.4	24.8	21.8	18.9	16.0	17.7	20.2	23.2
Water & Electricity	2.4	6.9	9.1	11.2	11.9	11.7	11.2	11.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Share (1) in GDP	13.0	15.6	18.3	18.3	19.7	20.0	19.7	19.9

Source: BMI, Annual Report, 1956-76 and National Income Of Iran, 1959-71.

and public utilities (water and electricity). Around 88.2 percent of value added in this sub-sector belongs to manufacturing and construction, and the public utilities account for 11.8 percent of the total in 1976. Considering the pattern of growth, the public utilities show an increasing contribution to the total growth of this sector; it registered an increase from 2.4 percent in 1959 to 11.8 percent in 1976 (table 4-1). Although the growth rate of public utilities has been faster than other components, its contribution to the total growth rate of the industrial sector has been low due to its low share in the total value added. Here, we will examine the performance of each component (public utilities, construction and manufacturing) of the industrial sub-sector, their relative importance, and the structural changes that have been brought about under the influence of the government's direct investment and credit policy.

4-1 Public Utilities

In this section we will analyse the financial performance of the nationalised water and electricity companies. The main question to be answered is whether the choice of channel of financing has been an appropriate one. Whether public money has been used or the self-financing channel, and how may these choices affect the distribution of welfare with regard to the government expenditure?

In order to evaluate government policy with regard to the development of public utilities, one has to distinguish between government spending for the public good and spending which does not fall in that category. In the capitalist system, a private market economy is the "natural" condition of society and it is assumed that it will lead to maximization of value produced. However, there are some goods which are desired but will not be produced in sufficient numbers by the private sector due to the technical difficulties and the social characteristics of demand. These would call for collective

production by the state. Such a public good is defined as "...collective consumption goods (X_{a+1}, \dots, X_{n+m}) which all enjoy in common in the sense that each individual's consumption of such a good leads to no subtraction from any other individual's consumption of that good, so that $X_{n+j} = X_{n+j}$ simultaneously for each and every i th individual and each collective consumptive good."¹ This "public good" bears three qualifications: externalities, indivisibilities and collectiveness. By which we mean; a) when one person is supplied with certain services, other people automatically receive services; b) a service cannot be consumed "privately" or a factor of production used "privately" in the diseconomy case; and c) it has to be consumed "collectively".²

There may be a few examples which fit the above mentioned qualifications such as defence and light houses (so called polar cases). Even in these cases the conditions can be met only when the supply is sufficient to meet the demand at any time if the consumption of a product by consumer A is not to disturb consumer B. The limitation of supply or the "degree of coverage" may be an important factor when we deal with a "public good". However, most of the services normally provided by the state do not fit the qualifications of the "public good". Education and health are some examples. The provision of such services by the state is not a consequence of externalities or indivisibility as such. For example, education is a private consumption good which can be parcelled out among different individuals³. In this case, the reason for the provision of such services by the government should sought in the social characteristics of the demand for the services. In general, it is the reflection of the political power of social classes and it is the outcome of a compromise between conflicting social groups⁴. Therefore, the necessity of the normally provided public services is not merely a consequence of the economic characteristic of such goods but it is also the reflection of socio-political conflicts.

While the provision of some public services is not fully subject to the economic criteria, it raises a problem with regard to the equal distribution of welfare stemming from government expenditure and the choice of financing channels. Wherever the indivisibility and externality exist, the decentralised pricing system for those public services may be technically difficult and a collective system of financing or generally taxation become appropriate. However, since not all services provided by the government bear the qualification of public good, there is no reason why the government services should be totally financed through taxation. The degree that taxation can be used as a source of financing is largely dependent on the characteristics of the service whether it provides a fair distribution of welfare of the government expenditure or not. The larger the possibility of divisibility and the lower the "degree of coverage", the less appropriate will be the use of taxation as a source of financing such a service. The public services ranges from Samuelson's polar case (like defence) to public utilities (gas, electricity and water). Public utilities may have the least qualifications of the "public good". The consumers' demands are different in magnitude depending on the income group they belong to (for gas and electricity in particular). These goods can be parcelled out and the possibility of divisibility is large. These characteristics of demand for public utilities may put them at the bottom of the list to be financed through taxation. Assuming the taxation system reflects the equal burden of taxation for each tax payer, the financing of public utilities through taxation discriminates against the lower income groups whose demand are lower. This discrimination will be accentuated in developing countries where the public services have no nation-wide coverage. These reasons may suggest that the financing of public utilities should be based on the cost-price relationship rather than the using of tax payers money, although the structure of production may validate these services being supplied by government monopoly

rather than private sector.

The public utilities are mainly natural monopolies, that is, as physical distribution involves a link between suppliers and consumers, competition is rarely possible and even cause waste of capital⁵. In this respect, the economic of scale may appear as an important factor in determining the right of monopoly. Moreover, all these services are essential to household welfare and enterprise needs. These characteristics of public utilities show the substantial social costs and benefits carried by these services which may suggest the direct intervention of the government in providing such services.

The social necessity of such production and its economic characteristics were the main reason for the nationalization of electricity companies and the restriction imposed on the installation of private power generators in 1965 in Iran. Before then, the electricity in cities was provided by the municipalities and private power generator neither of which were able to produce sufficient electricity, and the lack of coordination among them made the efficient and full utilization of their capacity impossible. For instance, in Tehran around 36 power generators were in use in 1965⁶. Similarly, the government has intervened in the exploitation of water resources in which social costs and benefits divert from those of the private sector and the investment involved is too high to be handled by the private sector. The government's investment in multi-purpose dams started during the Second Plan and has continued throughout the Third, Fourth and Fifth Development Plans in order to raise the rate of exploitation of surface water reservoirs.

However, although both water and electricity are controlled by the government, the financial performance of these companies is somewhat different due to the structure of the markets. Here, we will examine the financial channels which have been used by these companies and their merits.

Nationalised Water Companies

The plan disbursements for water and irrigation in relative terms has declined from 23 percent of the total disbursement of the Second Plan to 5.6 percent of the Fifth Plan. This can largely be interpreted as the decreasing importance of the water sector relative to other sectors and particularly the manufacturing sector during 1963-78 period. Despite the decline in relative terms the large financial ability of the government during the Fourth and the Fifth Development Plans has allowed the government to increase its financial allocation to the water sector in absolute terms i.e. a rise from 17.3 Billion Rls. during the Second Plan to 160 Billion Rls. in the Fifth Plan (table 4-2).

Here, what we are going to question is not the government achievement in the exploitation of water resources, but mainly whether or not the financing channel which has been used is an appropriate one. To what extent water companies have used self-financing as their source of finance. Should public money be used for financing water companies?

In order to answer the above questions, first we look at the aggregate financial performance of 10 regional water companies. As table (4-3) shows, the water companies have been running at an increasing loss during 1969-76 period. The loss consists of depreciation of capital and the net loss in their current accounts. These losses have been financed through the budgetary contributions which indicate the annual subsidies to the consumers. Also, the annual investment has been largely financed through the budgetary allocation which on average accounts for 86.5 percent of the annual investment. The above financial performance shows that not only have the water companies largely relied on the public money for their investment, they have also been entitled to receive an annual subsidy on their ordinary operations. This situation indicates that the water companies have supplied their products at a price lower than their average cost of production and far below

Disbursements Of Plan Organization For the Industry
And Mining Sector During Various Development Plans ¹

Table (4-2)

Billion Rials

	Second Plan	Third Plan	Fourth Plan	Fifth Plan
Manufacturing	8.7 (11.6)	16.5 (8.1)	111.2 (21.9)	352.0 (12.4)
Mines	0.1 (0.1)	0.6 (0.3)	1.9 (0.4)	62.0 (2.2)
Construction, Housing & Urban Development	4.5 ² (6.0)	19.4 (9.5)	49.9 (9.8)	595.0 (20.9)
Water	17.3 (23.0)	28.1 (13.7)	42.0 (8.3)	160.0 (5.6)
Electricity	3.6 (4.3)	15.7 (7.6)	37.7 (7.4)	240.0 (8.4)
Total Manufacturing & Mines	34.2 (45.5) %	80.3 (39.2) %	242.7 (47.9) %	1409.0 (49.5) %
Total Plan Disbursements	75.2	204.6	506.8	2847.0

Note: 1- () show percentage share in total plans' disbursements.

2- Since a similar classification to those of other plans is not available for the Second Plan, the figure indicates the urban development. The detail of the Second Plan shows that Housing and some government building are also included in the above item.

Source : Plan Organization, Final Report on the Second Development Plan; The third Development Plan and the Fifth Development Plan; BMI, Annual Report 1965, 1971 and 1976.

Losses , Expenditure And Financing Of Water Companies

Table (4-3)

Million Riels

Year	Losses	Financing Losses		Total Expenditure	Capital Expenditure	Budget Contribution
		Budget Contribution	Utilization Of Reserve And Provision			
1969	166.5	86.1	80.4	9863.4	9538.7	5730.8
1970	204.1	126.5	77.6	12020.7	11525.4	9483.6
1971	256.0	123.2	132.8	11231.8	10647.0	9206.1
1972	482.6	88.3	394.3	14790.7	13890.7	11638.1
1973	1030.1	228.1	802.0	15118.1	14560.8	13913.5
1974	1801.9	458.4	1343.5	26665.4	26120.9	24136.8
1975	2431.7	392.5	2039.2	27591.4	27048.4	23873.5
1976	2744.7	741.5	2003.2	41980.4	41195.3	35725.2
Total	9117.6	2244.6	6873.0	159281.9	154527.2	133707.6 (86.5) ¹

Note : 1- Percentage share in the capital expenditure.

Source : Budget Acts, 1970 - 76.

the marginal cost.

Relying on public money or the tax payer money may be questioned on the grounds of equal distribution of welfare stemming from the government expenditure in the case of water companies in Iran. Taking into account that the government service with regard to water distribution does not cover the whole of the country, one may argue that those who are not receiving such a service may be at a disadvantage relative to those who benefit from the government's investment in water. As table (4-4) shows only 33 percent of water needed for cities, industries and agriculture was provided by the nationalised companies at the end of the Fourth Plan. It is estimated that by the end of the Fifth Plan at least 40 percent of water needed will be provided by the nationalised water companies. Not only does the water supply not cover the whole of country, more importantly, its distribution may further limit the beneficiaries of the government's investment. Although by the end of the Fifth Plan, all people in the cities and industry will be served by the nationalised water companies, the importance of these two groups in the total water needs is very insignificant. These groups account for only 7.8 percent of the water supplied by the public sector and 92.2 percent is to serve the agricultural sector. The agricultural sector accounts for 97.6 percent of total needed water in the country, of which only 38 percent is provided by the public sector. As has been explained in chapter (3), only a few large agricultural units have benefited from the water supplied by the public sector. The above shows that government investment and subsidy have benefited a very small part of the population.

Still one may argue that there should be an indirect effect of government investment and subsidy in the water sector to the whole of the country. The above government assistance may reduce the cost of production to agricultural companies and lower the prices of necessary products. Considering

Demand And Supply Of Water By Major Sectors

Table (4-4)

Million Cube Meter

Sectors	End of Fourth Plan	End of Fifth Plan
Water Supplied By Public Sector	11558 (33.3) ¹	16015 (40.3) ¹
a- Cities & Industry	768 (6.6) ²	1255 (7.8) ²
b- Agricultural Sector ³	10790 (93.4) ²	14760 (92.2) ²
Water Used By Cities and Industry	690 (2.0) ¹	958 (2.4) ¹
Water Needed For Irrigated Crops	34000 (98.0) ¹	38800 (97.6) ¹
Total Needed Water	34690	39758

Note ; 1- () indicate the share in total needed water

2- () indicate the share in water supplied by the public sector.

3- The share of public-supply of water in the total water needed for agricultural purposes is 31 percent at the end of Fourth Plan and 38 percent at the end of Fifth Plan.

Source : Plan and Budget Organization, Statistical Year Book, 1976.

the very small share of large agricultural units in the total agricultural output, they are not able to affect the level of prices. This may only reduce the cost of production and raise the profit of the agricultural companies. Therefore, the government subsidy would not be passed on to the consumers of the agricultural products throughout the country.

While the above indicates that public money has benefited a few profit earners in the agricultural sector, it should be considered whether the government could have chosen any other channel of financing. Since the source of finance of investment affects the distribution of welfare, in financing an approved project, either tax payers must find the funds or consumers must pay through higher prices. As have been argued, since the effects of the above investment have been in favour of a small minority, the second channel of financing would have been appropriate with regard to the distribution of welfare of government investment. In this respect, the government could have chosen the right rate of return of capital and have transferred the cost of the operation to the consumer through higher prices.

However, there may be a number of problems in the choice of the rate of return of capital (this is not our concern) and the possibility of transferring the cost of production to the consumers. In the latter case, some factors in particular should be considered including the degree of competition and the alternative investment open to consumers. If there exists an active private sector, it can reduce the possibility of transferring the cost of production to the consumers; and the higher cost of production relative to that of the private sector may reflect the lower productivity in the public sector due to mismanagement. However, although not more than 40 percent of water needed is provided by the public sector, the nationalised water companies enjoy a fair degree of monopoly:

a) Water is a constraining factor in the Iranian economy. This scarcity

would provide enough flexibility for the price to be determined with relation to the cost of production.

b) Surface water has been nationalised and the utilisation of such resources needs the government permission.

c) The high capital involved in the exploitation of surface water may limit such investment to the government.

d) Consumers may not have any choice where water is in short supply. Particularly, where the use of the product requires investment by the consumers, active choice is infrequent⁷.

Although one may argue that under the above conditions it should be possible to pass on the cost of production to the consumers, there are other factors at work which may reduce the degree of monopoly of suppliers. Due to government policy with regard to restructuring of the agricultural sector, the nationalized water companies are, to some extent, confronted with an oligopoly of consumers (large agricultural units) which may have been able to influence the price of water. The government fears that the rising of cost of water to the large agricultural units may reduce the incentive to invest to those companies and affects the investment in the agricultural sector (see chapter 3 for the evaluation of the policy). This situation is also accentuated by the government's fear with regard to the control of prices of food stuffs. For instance, the government refused to accept the increase in prices of agricultural products suggested by the Agri-businesses during 1973-76⁸. This reduces the possibility of exerting higher prices by the water companies. However, the government's fears in this respect may be groundless since the share of these companies in total agricultural products is very insignificant and they may not be able to influence the price level.

Another problem which nationalised water companies are confronted with is the non-existence of the developed capital market able to supply

the necessary long-term loans. This also limits the tax-money as the major source of financing large projects. But, still, if the water companies had considered the marginal cost of production as the basis for pricing, the companies could have contributed to government revenue in the long run which could have compensated the losses in the early years. Therefore, using the tax-payers money cannot be justified on this ground in the long run.

The above structure of the market shows that to some extent the nationalised industries have been affected by the government's agricultural policy and price controls. However, the price of water being lower than it should be (the cost of production) encourages wasteful use of the service in the more optional, luxury uses; and equipment will be badly designed. Particularly, in a country where water is a scarce resource, charging consumers according to the marginal cost of production will help to maximize the utilization of water resources.

Having chosen financing through the tax revenue, the government has undermined the optimal utilization of scarce resources. However, whatever the reasons for and against financing public utilities through taxation are, the choice of channel of financing has been affected by the source of government revenue. Since a large share of government revenue is provided through oil money, it has given the state a degree of independence and tax-payers opinion about the expenditure may have been less reflected in the choice of finance. However, the total reliance on public money reduces the financing of those services which are highly socially desirable and economically bear the qualification of the "public good". Taking into account that the decentralised price system could have been efficiently used in the case of water, more reliance on self-financing may have been more appropriate.

Nationalised Electricity Companies

In the case of electricity the situation is different both with regard to the degree of reliance on public money and the rate of return of capital. The aggregate financial performance of power companies is better than that of the water companies. They have produced profits which on average shows a return of 8 percent to capital invested during 1969-76 (table 4-5). Since the period covering the profit may not conform with the investment period, it is more appropriate to calculate the rate of return of capital with a lag of two or three years. Taking into account the lag involved, the rate of return of capital moves up to 14.5 or 15 percent. Assuming the cost of capital to the government is equal to the interest paid on government bonds (around 9 to 10 percent), the price of electricity has been determined above the average cost of production. Nevertheless, this rate has been lower than that prevailing in the manufacturing sector (between 20 to 30 percent).

Despite the successful operation of electricity companies, due to the lack of efficient capital market the large projects which have been launched since 1973 has rapidly raised the need for contributions from the budget. The share of budgetary contribution in capital expenditure has risen from 42.8 percent during 1969-72 period to 57.2 percent during 1973-76 (table 4-2).

The above financial performance shows that the electricity companies have been able to operate profitably and have transferred the cost of production to consumers. Therefore, contrary to the water companies, the consumers have paid for the service supplied by the public sector. Although in the short run public money has been used to finance the projects in electricity, the electricity companies would be able to contribute to government revenue. It seems the main reason for using public money has been the

Profit, Expenditure and Financing of Power Companies

Table (4-5)

Million Rials

Year	Profit	Total Expenditure	Capital Expenditure	Budget Contribution	Foreign Loans
1969	1894.7	7469.6	7258.6	2696.7	-
1970	2445.8	10793.9	10556.2	3074.0	-
1971	2056.7	16754.7	16407.7	7386.0	1530.0
1972	2478.8	12915.5	10084.0	5819.2 (42.8) ¹	1071.0
1973	3103.4	39417.8	36936.3	25363.1	1626.1
1974	2591.2	23771.4	15632.6	10645.4	4717.1
1975	1850.0	42447.0	34251.1	22781.0	9211.8
1976	2157.4	83907.6	80243.0	36824.0 (57.2) ²	32692.0
Total	18578.0	237477.5	211369.5	114589.4 (54.2) ³	50848.0 (24.1) ³

Notes : 1- () show the share of budget contribution to capital expenditure during 1969 - 72.

2- () show the share of budget contribution to capital expenditure during 1973 - 76.

3- () show the share of budget contribution and foreign loans relative to capital expenditure for 1973- 76.

Source: Budget Acts, 1970 - 77.

non-existence of an efficient capital market. The electricity companies have also resorted to the international capital market; as table (4-5) shows, foreign loans account for 24.1 percent of the capital expenditure.

4-2 Construction

As table (4-1) shows the share of construction in the total industrial value added declined from 29.4 percent in 1959 to 16 percent in 1973 when the rise in oil revenue allowed the rapid expansion of the construction sector; its share moved up to 23.2 percent by 1976. However, while in the early years the private sector was the main one responsible for the growth of value added in this sub-sector, in the later years the expansion of public construction has been the main factor for the rising share of construction sector.

Generally, the value added in this sub-sector is strongly affected by the pattern of investment with regard to allocation of investment into construction and machinery as well as the relative productivity of labour. As far as the former is concerned, it can be argued that in the early stages of development with scarcity of capital, the investment has to be in the sector with the highest productivity in order to maximize the utility of the scarce resources. Therefore, investment in construction with a lower productivity has to be minimized in favour of higher investment in machinery. Nevertheless, there are some factors which impose limits to such maximization of scarce resources.

Theoretically, the minimum feasible investment is determined by the needs of economic and social institutions. For example, the related buildings for manufacturing are the necessary condition for carrying out a project and construction in port and road projects can be recognised as the complementary investment in economic institutions. The need for shelter,

basic health and education would also call for a high investment in construction of social institutions.

However, in practice, the allocation of investment between construction and machinery is affected by market imperfection, uncertainty on the part of the private sector's investment, and political structure of the society when the public investment is considered. The market imperfection and uncertainty create a high potential risk in the undertaking of investment in industrial plants relative to the traditionally low-risk investment in housing. In the early phase of industrialization, the lack of knowledge about investment in modern industries and their potential profitability may raise the risk involved. However, along with the development of the manufacturing sector and the rising of the degree of market integration, the risk would decline and a higher share of private investment would move towards machinery. In this way, with economic development, the pattern of investment would have changed towards a higher investment in machinery if a greater weight has been given to construction in the early stages of development. Although, as was said above, the priority of investment in construction may be plausible, the possibility of maximum utilization of the construction has to be considered as important; that is whether the investment is in the building of a hospital, school and cheap residential housing, or luxury houses and military bases. With the above argument we can explain the pattern of growth of construction in Iran.

As table (4-6) shows the relative share of investment allocated to construction has been declining, indicating a decrease from about 72 percent in 1965 to 58.1 percent in 1976. This was one of the reasons for the decrease in the share of the total value added in this sector. The relative decline in investment was largely noticeable in the private investment in construction which shows a decline from 66 percent to 42.5 percent of the

Gross Fixed Capital Formation By Major Sectors
For Selective Years, At Constant Prices

Table (4-6)

Yaer										Billion Rials			
	Public			Private			Construc- tion	Machi- nery	Total	% (1)	% (4)	% (7)	% (1)
	Construc- tion (1)	Machi- nery (2)	Total (3)	Construc- tion (4)	Machi- nery (5)	Total (6)				(3)	(6)	(9)	(7)
1965	31.7	8.8	40.5	29.1	15.0	44.1	60.8	23.8	84.6	78.3	66.0	71.9	52.1
1970	56.7	26.7	83.4	31.3	25.0	56.3	88.0	51.7	139.7	68.0	55.6	63.0	64.4
1973	91.9	39.4	131.3	51.1	57.5	108.6	143.0	96.9	239.9	70.0	47.0	59.6	64.1
1974	124.9	62.5	187.4	52.5	55.6	108.1	177.4	118.1	285.5	66.6	48.6	62.1	70.4
1975	189.5	67.1	256.6	69.6	134.9	204.5	259.1	202.0	461.1	73.8	34.0	56.2	73.1
1976	208.9	93.6	302.5	90.3	122.2	212.5	299.2	215.8	515.0	69.1	42.5	58.1	69.8

Source : BMI, Annual Report, 1970 - 76; and National Income Of Iran, 1959 - 71.

total private investment. In this respect, two factors are to be considered as important. First, the promising future in productive investment in the manufacturing sector after the recession of 1961-63 and the advent of the land reform may have caused a diversion in the pattern of investment on the part of private investors; a relative rise in the importance of the manufacturing sector relative to the housing sector. Secondly, although housing has been one of the most important activities of the private sector, a period of stagnation has appeared in this sector. In this respect, the possibility of speculation in land may have retarded the investment in housing with a lower profitability. This situation was accentuated in 1975 when the large government investment caused a temporary shortage in building materials and the rising of wage levels further aggravated the condition.

As far as the public sector is concerned, although a decreasing tendency in the share of public investment allocated to construction can be noticed, the trend is not as clear as in the case of the private sector (table 4-6). However, the public sector not only had a higher contribution in the total value added, but this contribution has also been increasing over the period. As table (4-6) indicates the share of public sector investment in construction has moved up from 52 percent of the total investment in construction in 1965 to 73.1 percent in 1975.

To what extent investment in construction has been economically useful is hard to say. As far as housing is concerned, the private sector has been active. A large part of the private investment in construction (about 80 to 90 percent) has been in residential building; however, it is almost impossible to distinguish between cheap and luxury buildings. But, here, an attempt has been made to show the overall trend of residential building in Iran. Table (4-7) shows the distribution of households by number of rooms

Distribution of Urban Households By Number of
Rooms Occupied in 1966 and 1972

Table (4-7)

Percentage

Number of Rooms	1966 %	1972 %
1 Room	40.1	27.2
2 Rooms	29.8	35.6
3 "	13.8	19.3
4 "	8.4	10.7
5 "	3.8	3.8
6 and over	4.1	2.3
Not Explained	-	1.0
Total	100.0	100.0

Source : For 1966, Statistical Year Book of Iran, 1972, p. 125, Table 7;
For 1972, Results of Urban Household Budget Survey 1972, Bureau
of Statistics, Plan Organization.

Housing Units Financed By the Housing Organization

By Number of Rooms Upto 1973

Table (4-8)

	1 and 2 Rooms	3 Rooms and More	Number of Rooms Not Reported	Total Housing Units
Number of Projects	7403	1861	1143	10407
% Share	71.1	17.9	11.0	100.0

Source : Plan Organization, Statistical Year Book of Iran, Bureau
of Statistics, 1972.

occupied in 1966 and 1972 for urban areas, indicating an increase of 13.5 percent in occupation-group of 2 to 4 rooms. More importantly, the percentage of occupation in group of six rooms and more shows a decrease from 4.1 percent in 1966 to 2.3 percent in 1972. It implies that there has been a tendency toward relatively cheaper houses. However, this has to be considered with caution since it does not show the cost of construction.

In this respect, government activities in residential building during 1968-73 concentrated on relatively cheap houses. As table (4-8) shows in the case of houses built by the Housing Organisation, around 70 percent of housing units consisted of one and two rooms. However, as table (4-9) illustrates in total 19564 housing units were constructed under the public sector allocation for housing in the Fourth Plan; but, this hardly reached 6.3 percent of housing units built during 1968-72. If the allocation of the government agencies, not included in the plan, is taken into account, the share of public sector in housing would reach 7.4 percent of the total housing units.

However, housing has never been the main interest of the government in the allocation of public expenditure; and it has been left to the private sector since traditionally the private sector has been active in housing due to the low risk involved. Table (4-10) shows that allocation of the Third and Fourth Plans for housing hardly reached 1.8 and 2.1 percent of total public construction respectively. However, the Fifth Plan recognised the situation in the housing sector as critical (it had been created by the large migration from rural to urban areas) and therefore rose the allocation of the plan for housing up to 13 percent of the total public construction.

With regard to the distribution of the public housing one may say that it has been unequal. Around 95 percent of the plan's disbursement for

Number of Housing Units Constructed By Public
and Private Sectors During 1968 - 72
(In Urban Areas)

Table (4-9)

	Number of Housing Units	Percentage Of Total
Private	290000	92.6
Public Plan Allocation	19564	6.3
Public Other Than Plan Allocation	3427	1.1
Total	312991	100.0

Source : Plan Organization, Bureau of Statistics, Statistical Year Book of Iran, 1972.

Direct Government Investment and Direct Government
Assistance to the Private Sector In Housing

Table (4-10)

		1963-67	1968-70	1971	1972	1973	1974	1975	1976
Housing	(1)	2.4	0.6	1.6	4.4	13.2	32.5	51.2	62.0
Credit to Private Sector	(2)	1.1	0.5	0.4	0.5	-	1.4	1.3	1.2
Total	(3)	3.5	1.1	2.0	4.9	13.2	33.9	52.5	63.2
Ratio (1)/ Public Construc- tion ¹	%	1.8	0.3	1.9	4.1	9.2	14.2	12.5	10.6
Ratio (2)/(3) (%)		31.4	45.4	20.0	10.2	-	4.1	2.5	1.9

Note : 1- For the Public Construction see Table (4-6)

Source : Plan and Budget Organization, Final Report of Third Plan;
Statistical Year Book, 1972 - 76.

housing was allocated to worker and particularly staff housing in the public sector. Table (4-11) shows the detail of allocation for housing in the Fourth Plan; only 16 percent of total allocation can be used by the private workers and employees and about 58 percent by police and gendarmarie forces. However, although some deficiency can be seen in the distribution of houses, on economic grounds the low cost housing has to be considered as useful and desirable.

Government direct assistance to the private sector is almost negligible. As table (4-10) shows it accounts for only 1.9 percent of the total allocation for housing in 1976.

Problems will arise when public construction other than housing is considered. Since it is not possible to show public expenditure in construction item by item, it must be accepted that all the government's expenditure in port and road construction, public utilities, education, health and regional development was economically viable or socially desirable. In this way, a distinction can be made between the above and the government expenditure in defence, internal security and civil administration the importance of which is determined by the political structure of the society. While the first group of investment would lead to a higher productivity in one way or another, for example investment in road construction would lead to release the economic bottleneck existing in the process of market integration, and health and education can be recognised as investment in human capital which would materialise in the long run, the second group of investment not only would not result in higher productivity but can also be considered as a waste of natural and human resources.

With the above argument, a rational economic system has to keep the investment for construction in defence and security forces at the minimum that is feasible. If revenue constraint is considered as the major determinant of public investment, the trade-off existing between the components

Government Allocation for Housing
By Type of Use During the
Fourth Plan

Table (4-11)

Housing By Use	Plan Disbursement Million Rls.	Percentage
Staff Housing:	3360	84.1
Borders' Areas	(536)	(13.4)
Areas Not Attractive to Private Sector	(510)	(12.8)
Gendarmeries	(516)	(12.9)
Police Force	(1798)	(45.0)
Cheap Housing:	633	15.9
Poor Areas in Tehran	(633)	(15.9)
Total	3993	100.0

Source: Plan and Budget Organization, Fourth Development Plan

Share of Government Investment in
Buildings in the Total Public
Construction

Table (4-12)

Billion Rls. (Cur. Prices)

	1963-67	1968-70	1971	1972	1973	1974	1975	1976
Government (1) building	8.7	13.3	8.2	12.6	31.6	45.1	68.7	66.9
Total Public(2) construction	135.1	181.0	85.6	108.2	145.9	228.1	410.9	583.0
Ratio of(1)/(2) Percentage	6.5	7.3	9.5	11.2	21.6	19.8	16.7	11.5

Source: BMI, Annual Reports 1970-76; and see tables

of government expenditure has to shift the expenditure toward the first group of investment which are highly desirable when the allocation of investment is based on economic rationality.

Table (4-12) shows public investment in government buildings and its ratio to the total public capital formation in construction. It indicates that the ratio of government expenditure relative to total public investment in construction has moved up from 6.5 percent during 1963-67 to 21.6 percent in 1973. While it shows that the revenue constraint during 1970-71 did not reduce government investment in this sector, an increase in the government foreign exchange earnings for 1973 caused a great jump in the investment in government building from 11.2 percent in 1972 to 21.6 percent in 1973. This explains that economic rationality has been overshadowed by the political structure of the society. The lion's share of the allocation has gone to defence and security forces; and civil administration accounts for 15 percent of the total allocation. This percentage is even lower for the 1973-76 period that is 4 percent on average (table 2-11).

Labour productivity in the construction sector has largely been dependent on two changes with regard to the structure of the labour market and the capital in use. Typically, the supply of labour in this sector originates in the agricultural sector; most of the workers have no skill and are mainly engaged in part time jobs. Road construction, by its nature, has been the main source of demand for the unskilled labourers from the rural areas. However, gradually these workers move to urban areas after they become familiar with the conditions in the labour market and become involved in building construction. To some extent, road construction is a transitional stage in which the unskilled rural labourers become familiar with the basic skill of construction and urban working conditions⁹. During the period under study, road construction activity has expanded less rapidly than that of building construction. As a consequence, there has been a higher demand

for semi-skilled labour in this sector.

Along with the above changes, the capital in use in the construction sector has rapidly increased which has resulted in a higher output per worker. Nevertheless, the construction sector in the Iranian economy is relatively labour intensive; and the above change has only a marginal effect. For instance, although the construction sector is responsible for about 4 percent of GDP, its share of the total employed population is around 7 percent. Since the construction sector absorbs the unskilled labourers, particularly, from the rural areas, naturally, the productivity is lower than that of the manufacturing sector. As appears in table (3-3) the rate of growth of labour productivity in construction was about 6.2 percent for 1966-72 compared with 12.1 percent for the whole of the industrial sector.

Altogether, the government's policy with regard to the construction sector has been affected by the expansion of the government defence activity which is determined by the political structure of the society. Due to the importance of political determinants, the revenue constraint has not affected construction in the public sector but rather has discriminated against productive investment in other sectors. Also, because of the nature of construction in defence, the investment in public construction has been the most unproductive and undesirable. However, although, in the short-run, it has created a flow of income to low income-groups and has raised the employment level, in the long-run, the pattern of construction in the public sector may indicate nothing but waste of financial resources. In short, the political determinants and short-run considerations have overshadowed the long-run economic rationality.

4-3 Manufacturing Sector

Introduction

Rapid industrialisation as the main objective of developing countries

is accompanied by a change in the output, employment and the structure of the manufacturing sector. Industrialisation, as it is taking place in contemporary capitalist countries, emphasises the growth of output rather than employment. This pattern of industrial development is both the consequence of the natural path of development and the inevitable outcome of government development policy and the historical setting of developing countries today. The natural path of development follows the pattern of demand along with changes in the growth of income and the factor endowments of the nation. As far as the former is concerned, changes in demand patterns are affected not only by growth as such, but by changes in tastes, in relative prices and in other economic factors. Although these factors differ considerably from one country to another, when changes in the pattern of demand are compared in countries at different stages of economic development, some general pattern can be discerned. The important features are¹⁰:

- a) In the early phase of industrialisation, in the relatively low income nations, a large share of demand is devoted to food, textiles and other basic necessities. Moreover, at the low income level, a rise in income may generate a more rapid expansion in demand for the essentials of life — food and clothing.
- b) After a certain stage of development is reached, with the rise in real income, demand for durable consumer goods, chemical and capital goods rapidly rises, while the expansion of demand for food, beverages and textiles slows down.

Changes in demand pattern are not the sole influence on change in the pattern of output. The ability of an economy to produce different commodities also depends on the resource endowments both natural and human. If the natural resource endowment of a country is suitable for the production of particular commodities the local population can usually adapt in time to the needs of economic growth. This adaptation involves the acquisition of

new skills and implies a fall in the relative cost of skilled labour in the more rapidly growing sectors. Thus, changes in the relative costs which occur as a result of the acquisition of new skills will tend to reinforce the changes in demand.

However, in the early phase of industrialisation, the levels of skill and organisational ability set limits to the type of industrial process that can profitably be undertaken. Generally speaking, this means that the simpler forms of manufacturing, which are typical of consumer goods industries, tend to be developed before the more complex processes involved in capital and intermediate industries. The large light industries such as textile and food develop as a conglomeration of small-scale units which supply the necessary skill and capital. Moreover, since the optimum size of plant is much lower in the light industries than for the heavy industries, the development of large light industries will be eased¹¹.

On the other hand, in the early stage of development, the size of the market tends to be too small to justify the establishment of optimum size plants in more complex industries such chemicals and capital goods. But, these limitations on the supply side tend to be relaxed as industrialization develops, because new industrial skills and organisational abilities emerge and the wider market allows new industries to be profitably established.

However, in case of contemporary capitalist countries, the natural path of development has not been smooth. Being late-comers, industrialization in these countries is affected by the pattern of international trade of industrial products and the technological gap. Both factors cause a distortion on the pattern of the natural path of industrialization. Due to the lag of development of the capitalist sectors in the late-comers and developed countries, the development of indigenous technology in the former may be hampered when the domestic producers come into competition with the

latter. Since the technological gap may retard the development of the industrial sector in developing countries, the governments of developing countries have taken the necessary measures in order to foster and encourage the development of industrial sector. The government policy consists of protection of the domestic market, financial and technical assistance to the private sector and direct investment in the basic industries. All government policies aim at bridging the technological gap and raising labour productivity.

While the indigenous technology which owned by the small-scale industries is not capable of raising productivity rapidly in order to reduce the cost of production and make the industry competitive in the international market, government policy encourages large-scale industries with modern techniques of production. Modernization of industries is mainly based on imported technology in which the factor proportion is largely different from those existing in developing countries. By its nature, the imported technology is largely capital intensive even in those industries in which labour intensive techniques can be efficient¹². Therefore, in the contemporary capitalist countries, the large scale industries are no longer the conglomeration of small-scale industries, but they rather operate on the capital intensive technique extraneous to the industrial structure of these societies.

The creation of this dualistic pattern of technology produces a dualistic condition in the pattern of development of the manufacturing sector in developing countries in two ways: First, along with the rapid development of new large industries the traditional small-scale industries are able to survive. While the process of development would ultimately lead to the dominance of the modern large industries in the output of industrial products, the small-scale industries may remain as important sources of demand for the labour due to the labour intensive nature of their technology. Secondly, after a certain stage of industrial development is reached, the choice of technique in practice become rigid and a tendency towards

techniques with a higher capital ratio will develop. This particularly occurs when the growth of consumer industries relative to heavy ones slows down. This pattern would widen the gap between the growth of output and the absorption of man power in the manufacturing sector.

Government intervention in the process of industrialisation can only accelerate or slow down the rate of change. The effects of such intervention depends on the government's economic policies by which a labour versus capital intensive can be encouraged. The problem of choice of technique has an important implication with regard to policy making. The problem is what the appropriate technology in a developing country should be and whether such appropriateness can be reached in practice. This is the policy objective which determines government policy instruments, the relative importance of different means in the hands of government and the direction of such policies. Whether a government is going to pursue a set of policies to encourage output and productivity in the manufacturing sector or a higher absorption of labour by this sector would determine the direction of the economic policies. However, in practice, government policy is to pursue neither objective at the expense of the other and also the choice of technique is not infinite. Nevertheless, government policy may be biased to one objective rather than the other.

Theoretically speaking, in a country where labour is abundant and capital is scarce, a government with the aim of maximum utilization of economic factors should choose the labour intensive technique in the production method. This means that given a production function for a particular product expressing output as a function of labour (L) and capital (K), the technique with a higher L/K ratio should be chosen in order to maximise the utilization of economic factors. Therefore, the government's policy should be tailored to encourage the undertaking of labour intensive techniques by the private sector and the public sectors.

However, the capital-labour ratio as a criterion for the making of economic policy has been criticized by some economists including Galenson and Leibenstein¹³. It is true that the choice of a labour intensive technique would maximise output and employment, it may not produce the desirable results in the long-run. Instead, they suggested that the aim should be growth of output and employment. The creation of less employment and output now may lead to more employment and output at a future date, if a capital intensive technique is chosen. In this way, it is possible to maximise the reinvestible surplus by minimising the wage-bill. It is true that the capital intensive techniques generate a high output per worker and therefore, for a given wage rate, a high surplus. But, there are three points which may reduce the importance of the reinvestable surplus approach:

- a) It is assumed that all the surplus is reinvested, the profits are the source of investment funds and that no saving takes place out of wages. Although the profit earners have a higher marginal propensity to save, it does not mean either that the profit will not contribute to their consumption, or that a higher profit may be the same as the higher investment. In this respect, the effects on the pattern of consumption, the interest rates and the rate of return of capital may reduce the reinvestable surplus.
- b) By reinvesting the generated surplus in different capital intensive industries, the rate of growth of output may not be the same as the rate of growth of employment. Therefore, in the long run, a large gap may develop between these two patterns.
- c) The surplus maximising technique is not necessarily the most capital-intensive one. The surplus maximising depends on the slope of the function relating output to inputs and the wage rate. A high wage rate will dictate a capital intensive technique but a low wage rate will mean that a relatively labour intensive technique will maximise the surplus¹⁴. The lower the wage rate, the nearer is the surplus maximising technique to the

labour intensity and the same as the output maximising technique. Contrary, a higher wage rate will shift the point of surplus maximisation to the capital intensive technique.

Following the last point which has been put forward by Dobb and Sen¹⁵, one may deduce that in a developing country where the wage rate is usually low, the surplus maximising point should be nearer to the labour intensive technique and therefore there may not be any contradiction between maximising the present output and employment and those of the future, if the available technology allows such a choice. In practice, as was mentioned earlier, the choice of technique will be limited to what has been developed in advanced economies with a high capital-labour ratio, if an economy is not able to develop its appropriate method of production. Nevertheless, the governments of developing countries should pursue a set of policies by which they ensure the growth of output and employment as well as the development of indigenous technology. Taking into account, the possibility with regard to the choice of technique and the practical importance of the transformation of technological know-how, the government policy should encourage labour intensive techniques or maximising surplus when labour intensity is appropriate. However, with the maximising of surplus, one should be aware of its effects on the redistribution of income; by increasing the share of profit, it may worsen the income distribution. Should such techniques be used, other government policies should take care of redistribution problems. Overall, government policy should encourage small-scale and large labour intensive industries if the maximum utilisation of economic factors is to be reached in a developing country.

Another effect of technological dualism and the diversion from the natural path of development in the developing countries is that the linkages among different sectors of the economy and within the manufacturing sector will loosen. This divergence in the economy creates a strong link

between the rapidly growing modern industries and the metropolitan countries from which the technology is imported. The lack of sufficient linkages, not only will reduce the multiplier effects of investment, but also, in the long run would retard the development of the indigenous technology. Government policy should pursue higher back-ward and forward linkages among economic sectors and within manufacturing.

Here, we will examine the pattern of the Iranian manufacturing sector since 1959 and the effectiveness of government policy and its direction. Following the above theoretical explanation, first, we will analyse the pattern of industrialization with regard to the importance of demand and factor endowments. In this respect, the change in the pattern of traditional and heavy as well as rural and urban, and large and small industries will be examined. Secondly, the extent to which government policy has affected the pattern of development of the manufacturing sector will be explained. We are mainly concerned with the effects of direct government investment and government credit policy. Nevertheless, a brief examination of other government policies such as protection and direct intervention will be necessary in order to complete the picture.

4-3-1 Pattern of Development of Manufacturing Sector During the 1959-76 Period

In Iran, government intervention in the manufacturing sector goes back to the early 1920's when Reza Shah embarked on the establishment of the sugar industry. However, it was after World War II and particularly in the late 1950's, with the restoration of oil production that the government realised the necessity of intervention in the field of manufacturing where the private sector was not able to stand on its own feet. This is not to say that the private sector has played no role in the development of the industrial sector. But, direct government investment and assistance

in and to the modern industries had encouraged private investment in the manufacturing sector. The government tariff policies with regard to discouragement of imported consumer goods, later in the 1960's, to some extent the discouragement of intermediate goods have completed the government policies of import-substitution (or industrialisation) in the same way as its counterparts in other developing countries. All these have provided the necessary conditions for the development of the manufacturing sector during 1960-76 (see pp253-88 for the government policies during this period).

Some structural changes have occurred in the pattern of development of the manufacturing sector. These changes can be considered on two grounds: a) the changing pattern of the manufacturing sector with regard to the share of different industries in output and employment. b) The changing pattern of this sector regarding the size of establishments. Here, we will look at such changes in the pattern of the manufacturing sector in Iran during 1959-76.

4-3-1-1 Pattern of Development of Manufacturing Sector BY Type of Industry

Under the government policies, the pattern of the manufacturing sector has undergone a considerable change with regard to production and employment. The values added in the manufacturing sector has enjoyed a rapid growth during 1960-76; the growth rate has been higher than that of the GDP and the share of manufacturing in the GDP has moved up from 13.0 percent in 1959 to 19.9 percent in 1976 (table 4-1). While the share of manufacturing in the GDP has risen during this period, its share in the total employment has remained more or less unchanged. This implies that the change in the relative share in the GDP has been due to the increase in labour productivity relative to other sectors. As table (3-3) shows during 1966-76 the annual growth rate of productivity in the manufacturing sector has been

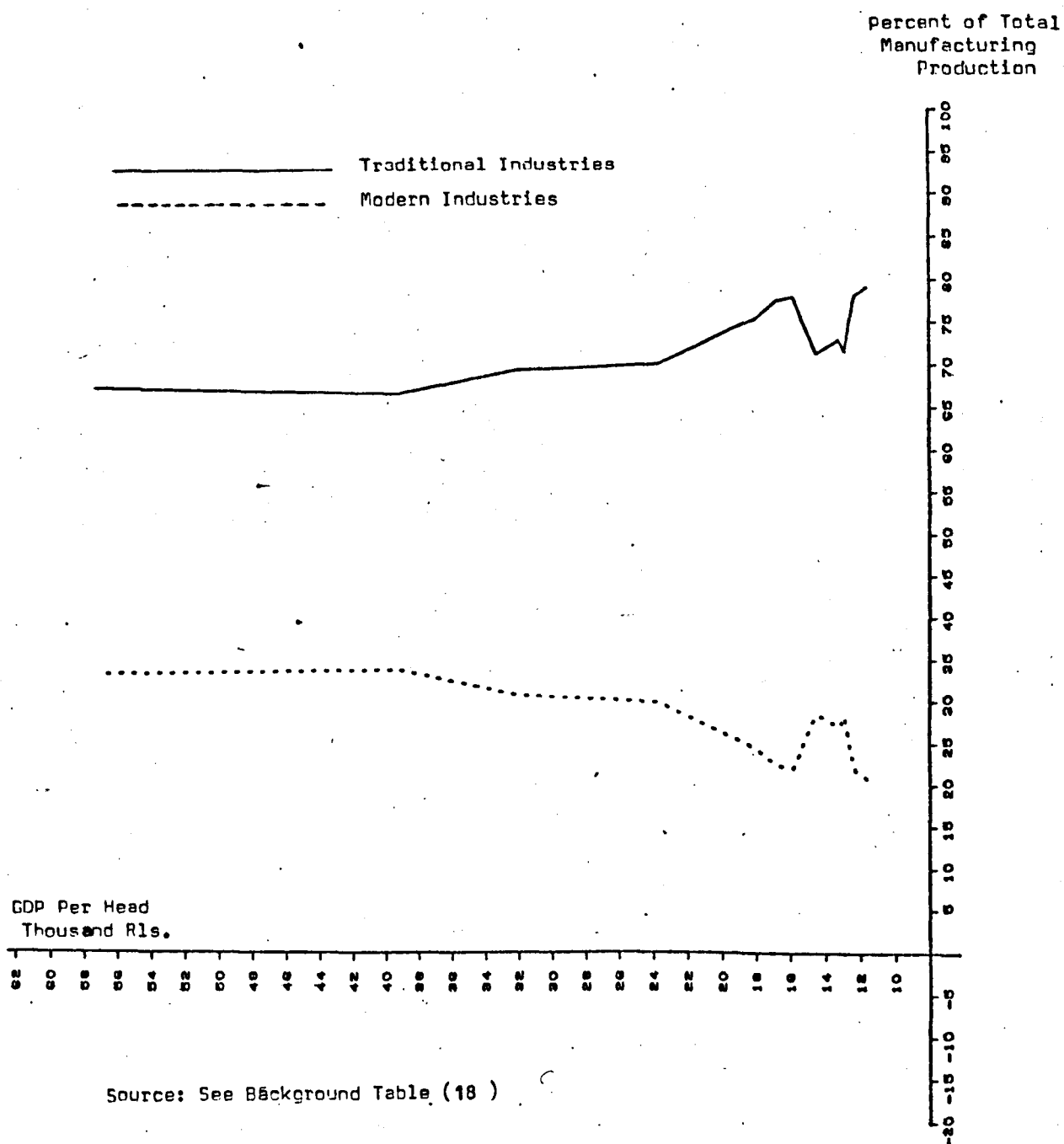
higher than that of the whole of the country (11.0 percent compared with 9.2 percent).

To a large extent, the pattern of development of the manufacturing sector has followed the change in the pattern of demand. With the rising of income per capita, not only has demand for industrial products grown, but also, a change has occurred in the pattern of output of manufacturing products. In the absence of data on the aggregate demand for industrial goods, one may assume that the pattern of output is a proxy measure for the pattern of demand. However, taking such a proxy measure one has to be cautious because some part of the rising of domestic output is due to the replacement of domestic products for imported goods. Therefore, the significance of such proxy measure may be reduced. Nevertheless, it would show whether the pattern of industrial output has changed along with the rising of income or not. As table (4-13) shows the income elasticity of industrial output has been greater than one (1.30) which indicates that along with the rising of income, the per head output has risen faster.

However, not all industrial products enjoy a similar income elasticity. As has been explained, for certain necessities, the income elasticity of demand will decline after a certain stage of development. If we classify different industries into two groups, traditional and modern (for definition, see below), the pattern shows the declining importance of the former and the rising of the latter. With the rising of income, the share of traditional industries in the total industrial output has declined from 79.2 percent to 66.9 percent. The change is particularly important where the economy passed the boundry of 16000 Rls. (approximately \$ 200) (figure 4-1). The income elasticity of output, for the income level above 16000 Rls., is well below unity in the case of traditional industries (0.60) and slightly above unity in the case of modern industries (table 4-13). However, there exists a considerable difference among industries in both groups with regard

Figure 4-1

Pattern of Growth in Manufacturing Industries



Income Elasticity of Demand For
Industrial Products By Major
Industrial Sectors During
1959-73

Table (4-13)

	<u>1959-73 Period</u>			<u>1965-73 Period¹</u>		
	e	T-Val.	R ²	e	T-Val.	R ²
Total Traditional	1.12	-7.2	0.795	0.60	-7.2	0.883
Food, Beverage and tobacco	1.24	-6.6	0.772	0.57	-5.8	0.827
Textile	0.91	-8.1	0.834	0.55	-7.0	0.875
Apparel	1.82	-5.9	0.720	0.67	-11.3	0.948
Other Tradi- tional	1.16	-8.9	0.859	0.79	-7.1	0.879
Total Modern	1.56	-8.8	0.857	1.06	-6.8	0.869
Chemical	1.79	-8.3	0.843	1.24	-6.2	0.847
Non-Metallic and Mineral	1.11	-9.5	0.875	0.79	-18.3	0.980
Basic Metal	2.60	-8.9	0.860	1.65	-7.1	0.879
Metal Products	1.12	-8.1	0.834	0.80	-5.1	0.818
Capital goods and Transport	0.30	-6.4	0.761	1.28	-6.8	0.869
Total Industry	1.30	-7.0	0.788	0.73	-7.3	0.884

Note 1 - This period covers income levels above 16000 Rls.

Source: See Background Table 18

to income elasticity and the possibility of expansion of production as a result of appropriateness of factor endowments. In order to examine the pattern of growth of different industries, we will analyse the change within each of the above mentioned groups.

Traditional Sector

When the manufacturing sector is divided into traditional and modern, the change in the relative productivity can be attributed to the latter while the former has the major contribution to employment. As table (4-14) shows the modern industries have had a higher rate of growth of production than that of the traditional sector. While the share of the traditional sector in the value added of manufacturing sector declined from 66.5 percent in 1967 to 56.3 percent in 1972, its share in employment declined only from 78.4 percent to 73.9 percent. This implies that the traditional sector may lose its share in the manufacturing output, but would remain as the major provider of employment. However, although the trend of changes in the manufacturing sector is clear, the traditional sector still accounts for a large share of manufacturing products; and the modern industries have far to go to appear as the dominant sector of manufacturing and, thus, a greater change would be expected in the future.

The traditional sector consists of food, beverages, tobacco, textiles, wood and wood products, paper and printing, and leather. Although the establishment of these industries goes back some decades, in some of them the method of production has been modernised. Food, textiles and apparel account for 80 percent of value added and 90 percent of the employment in the traditional sector. The early expansion of this sector can be attributed not only to the pattern of demand, but also, to the factor endowments of the nation. The traditional sector is largely labour intensive and in some industries there exists domination of small scale establishments which represent the domestic skill and the indigeneity of technology in this sector.

Value Added and Persons Engaged in
the Industrial Sector By Type
of Activities

Table (4-14)

Percentage

Type of Activities	1967	1967		1972		1972
	Value added	Value added	Employment	Value added	Employment	Value added
Traditional Sector	100.0	66.5	78.4	56.3	73.9	100.0
Food	31.3	20.8	10.0	15.5	10.6	27.5
Beverage	1.3	0.9	0.2	1.5	0.3	2.7
Tobacco	10.4	6.9	0.3	4.6	0.3	8.2
Textile	31.0	21.6	46.4	17.3	41.7	30.7
Apparel	18.2	10.0	13.3	11.4	13.1	20.2
Wood	4.4	2.9	6.4	2.8	5.4	5.0
Paper	1.3	0.9	0.3	1.5	0.5	2.7
Printing	1.7	1.1	0.7	1.5	0.9	2.7
Leather	0.6	0.4	0.7	0.3	1.2	0.5
Modern Sector	100.0	33.5	21.6	43.7	26.1	100.0
Rubber	5.7	1.9	0.6	1.7	0.8	3.9
Chemicals	12.5	4.2	1.0	6.8	2.2	15.6
Petroleum products	1.8	0.6	2.8	0.7	2.2	1.6
Non-metallic and Minerals	25.7	8.6	4.0	8.4	4.2	19.2
Basic Metal	5.4	1.8	0.4	5.3	1.8	12.1
Metal Products	16.4	5.5	5.1	5.5	6.3	12.6
Non-electrical Machinery	2.1	0.7	0.7	1.3	0.9	3.0
Electrical Machinery	10.1	3.4	1.0	4.1	2.0	9.4
Transport	17.0	5.7	4.3	8.9	4.4	20.4
Miscellaneous	0.3	0.1	1.5	8.6	1.3	19.7
Total	—	100.0	100.0	100.0	100.0	—

Source: See Background Table 18

However, along with the rising of income, a relative change in the pattern of the traditional sector can be expected. In this respect, as figure (4-2) shows there is a tendency toward producing those goods with a higher income elasticity. Two groups of traditional industries which have been able to keep their share in the total output, apparel and leather, wood and paper industries (other traditional) enjoy a higher income elasticity than those of food and textiles (see table 4-13 for elasticities). In particular, the share of the two main industries, food, beverages and tobacco, and textiles have been affected by the declining of income elasticity of demand. The share of first group in the total value added declined from 28.6 percent in 1967 to 21.6 percent in 1972. Similarly the second group declined from 21.6 percent to 17.3 percent.

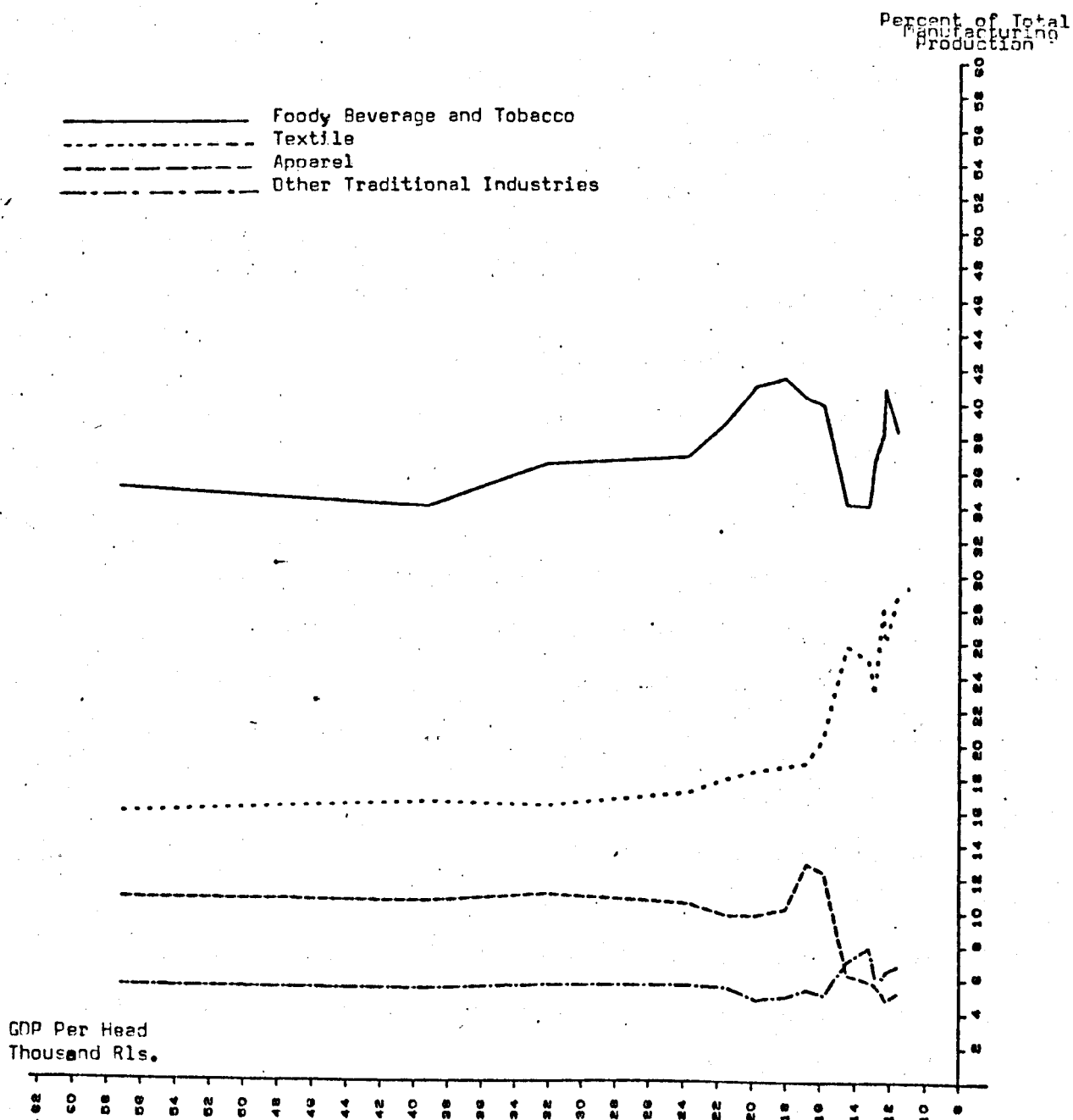
Modern Sector

The modern sector consists of rubber and plastic, chemicals, coal and oil products, nonmetallic and mineral products, basic metal, non-electrical tools and machines, electrical tools and machines and vehicles. While the former three can be classified as oil complementary industries, the latter are the import-substitution industries. As has been mentioned, the growth of modern manufacturing products has been of significance due to the great attention received by the public and private sectors during 1960's.

Along with the rising of income and particularly above 16000 Rs. (\$ 200) per capita, the pattern of development in the modern sector shows a change towards relatively more complex products. The development of modern industries which starts from production with simple technology appropriate to the existing pattern of demand at a certain stage of development, will move to the production of more complex manufacturing products with a longer process of production when the change in the pattern of demand, gradual acquisition of skill and adoption of new technology make it possible.

Figure 4-2

Pattern of Growth In Traditional Manufacturing



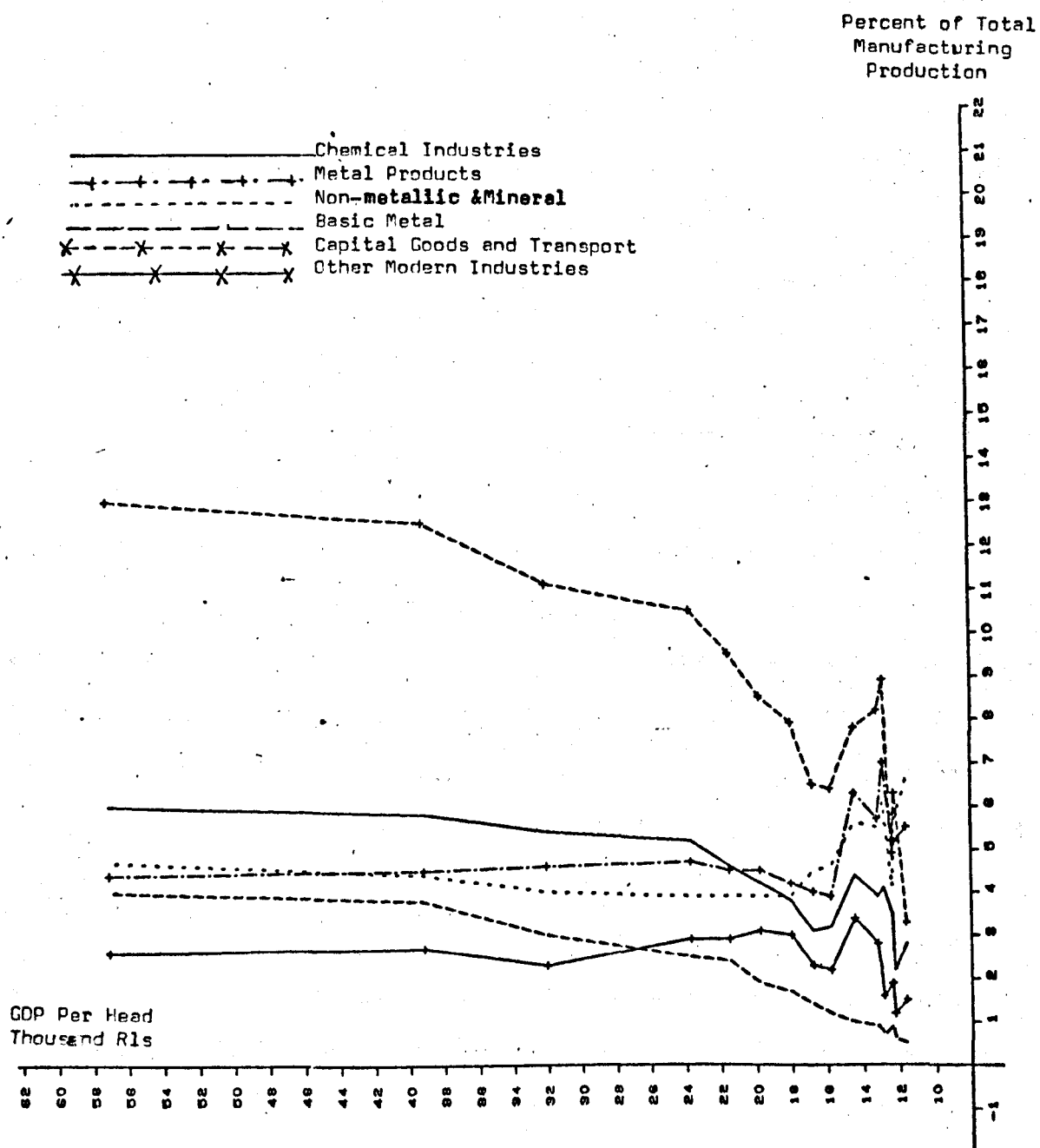
Source: See Background Table (18)

However, since most of the industries in the modern sector start from the last stage of assembling, there exists a large gap between the value of output and domestic value added which will be narrowed along with the development of complementary industries and the deepening process of production.

With such a pattern of development, it is not surprising to see that the share of metal products and non-metallic and mineral products in the total industrial output has declined (figure 4-3). As table (4-13) shows both industries suffer from low income elasticity of demand at the level above \$ 200 per capital. Except these two industries, other industries in the modern sector have enjoyed a high income elasticity of demand during this period. In particular, machinery and transport which includes consumer durable goods such as radios, TV, refrigerators, cars and so on has shown a high income elasticity.

Although there is a large gap between the pattern of output and value added due to the assembling nature of modern industries in Iran, the pattern of value added shows a similar pattern to that of the output as the scattered data in table (4-14) illustrates. The share of metal products and non-metallic and mineral products has declined. The metal products, mainly simple household durable goods (such as stoves, cooking stoves, non-electrical water heaters and gas lamps and so on), and non-metallic and minerals are the first to be produced due to their ready market and the simplicity of their production process as was explained above. With the change toward more complex durable goods, the necessary demand would be created for the development of intermediate industries such as basic metal and capital goods industries such as transport equipments, tools and machine products. As table (4-14) shows there is a clear tendency toward producing basic metal, transport equipments and machine and tool industries. The share of former has moved up from 5.4 percent in the modern industries in 1967 to 12.1 percent

Figure 4-3
Pattern of Growth In Modern Manufacturing



Source : See Background Table (18)

in 1972; and that of the latter has increased from 29.2 to 32.8 percent in the same period. The above pattern of development shows that the Iranian manufacturing sector has followed the pattern of demand and in a short period of time has passed the early phase of development. This has largely been due to rising of income as a consequence of oil production which has opened the possibility of expansion and diversification of production in the early stage of development. These changes in the pattern of production have also been accompanied by changes in the size of establishments which in general grow along with the introduction of new modern industries and the necessity of mass production.

4-3-1-2 Pattern of Development of Manufacturing Sector By Size of Establishments

When the pattern of the manufacturing sector by the size of establishment is considered, the above picture become clearer. The growth of modern industries shows that the large establishment is becoming more and more important in respect of output. The technological complexities related to the modern industries and the need for mass production would lead to the domination of the large establishment in the modern sector of manufacturing. However, this does not mean that the small industries have totally lost their importance as we will see later in this section.

Table (4-15) shows the distribution of value added by the size of establishments and industries. Here, we could make a distinction between rural and urban establishments, the latter has been divided into small and large establishments. The small establishment is defined as any establishment with fewer than ten workers, while the large establishment employs more than ten workers¹⁶. Since the 'large establishment' covers a large range of establishment, it is not possible to show clearly the pattern of development of the manufacturing sector.

Rural Industries

Rural industries are entirely small scale industries with the average being two workers or less. As table (4-15) shows the share of rural industries has moved up from 6 percent of total value added in the manufacturing sector in 1962 to 18 percent in 1972 and 14.4 percent in 1973. Here, one may question whether the empirical evidence shows the true picture of development of the manufacturing sector in Iran. Knowing the Iranian government has encouraged the modern establishment, the above pattern may be plausible. There is enough evidence to question the above pattern of development of rural manufacturing. The data on rural manufacturing is based on guess estimation and there is no regular official sampling from rural establishments. It seems that in the early years (1962-65), the value added for rural manufacturing had been underestimated. Therefore, the estimation in the later years has raised the growth rate which was due to underestimation in the early years rather than the real growth of rural manufacturing. In order to provide a more reasonable picture of the pattern of industrial production in the rural areas, we should consider the factors involved in the calculation of value added in the industrial sector. Generally speaking, in this regard, there are two factors to be considered, the growth of number of employed workers and the growth of labour productivity.

Thus, the growth of rural manufacturing is subject to the growth of employed population and the growth of productivity in rural manufacturing. Table (4-16) shows that the growth of employment for rural manufacturing has been about 4.2 percent annually which is lower than that of the urban areas (7.6 percent) during 1963-73. But, a careful examination of table (4-15) would reveal that the share of rural manufacturing in total value added in manufacturing sector has jumped from 7.0 percent in 1964 to 18.6 percent in 1969 and has remained stable there until 1973 when it declined to 14.4 percent. For the period 1964-69, the growth rate of employment

Distribution of Value Added By Size
of Establishment During 1962-73

Table (4-15)

Billion Rls. (current Prices)

Type of Establishment		1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973
Rural		2.3	2.5	3.4	4.4	7.0	9.8	15.3	20.0	21.9	23.7	25.5	28.9
	%	(6.3)	(5.9)	(7.0)	(7.8)	(10.7)	(12.3)	(16.5)	(18.6)	(18.2)	(17.2)	(16.4)	(14.4)
Urban:		34.0	39.9	45.4	52.0	58.6							
	%	(93.7)	(94.1)	(93.0)	(92.2)	(89.3)							
Small							24.8	26.6	31.2	35.0	42.6	46.0	50.4
	%						(31.1)	(28.6)	(29.1)	(29.0)	(30.9)	(29.6)	(25.1)
Large							45.1	51.0	56.1	63.6	71.7	83.8	121.7
	%						(56.6)	(54.9)	(52.3)	(52.8)	(51.9)	(54.0)	(60.5)
Total		36.3	42.4	48.8	56.4	65.6	79.7	92.9	107.3	120.5	138.1	155.3	201.0
	%	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Ministry of Economy, Iranian Industrial Statistics, 1968-73

Distribution of Employed Labour Force in the Manufacturing
Sector By Rural and Urban Classifications

Table (4-16)

												Thousand Persons		
	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	Annual Growth Rates Percentage		
												1963-73	1964-68	1968-73
Rural	615	568	581	631	662	713	711	739	725	779	926	4.2	5.8	5.4
Cities	455	534	589	521	673	685	757	804	855	936	947	7.6	6.4	6.7
Total	1070	1103	1170	1252	1335	1398	1468	1543	1580	1715	1873	5.6	6.1	6.0

Source: Ministry of Economy, Iranian Industrial Statistics 1969-73.

in rural manufacturing was around 5.8 percent which in comparison with 6 percent for cities is not low (table 4-16).

Therefore, since the growth rate of employment in rural manufacturing has not been greater than that of the urban, it cannot be the factor responsible for the growth of value added in the rural industries. This indicates that the relative change in the productivity should be the responsible factor. But, the growth of rural labour productivity must have been very slow due to the type of products and the backward method of production. Taking into account that the major share of production of rural manufacturing belongs to the carpet industries in which the hand-made nature of production has limited the technical improvement, in the absence of the necessary organizational assistance from the government the growth of labour productivity is bound to be very slow. Similarly, in the case of other art-craft industries, there has been a limited success in raising productivity. Indeed, one estimation shows that with the best government assistance, the productivity of art-craft industries in Iran could only have been raised by 2 to 5 percent annually which still would have been well below that of urban productivity in manufacturing sector during 1967-71 (9.9 percent annually). However, with the noticeable lack of such assistance, the improvement in the labour productivity was minimal¹⁷.

However, since the value added presented in table (4-15) is at current prices, productivity does not necessarily reflect real labour productivity. As the value added is at current prices, the relative change in the prices may be an important cause of the relative change in the pattern of development of the manufacturing sector. In this respect, the most important factor is the type of activities of rural industries which have allowed them to continue their contribution to the manufacturing sector. Rural manufacturing is mainly food, textiles and apparel; the latter two account for

60 percent of the total rural production. The share of textiles and apparel has increased by 5 percent during 1967-71. As appears in table (4-17), textiles have made large contribution to the growth of rural manufacturing; their share has moved up from 32 percent in 1967 to 42 percent in 1971. Around 90 percent of rural textiles consists of knotted carpets and the growth of rural manufacturing is largely related to the growth of value added in this industry.

However, if the change in prices is to affect rural manufacturing, this effect should be a result of change in the pattern of demand and supply for carpets. On the one hand, demand for carpets is highly income elastic; and as a consequence of rapid rise in the per capita income because of increasing oil revenue, a higher demand for carpets is expected. On the other hand, the supply of carpets is largely dependent on the growth of employment rather than the rising of labour productivity. Because of the nature of a hand knotted carpet, the growth of productivity is insignificant. These factors make the supply of carpets fairly inelastic relative to the rising of demand. With the above pattern of supply and demand for carpets, one may expect the price of carpets to rise along with the rising of income. As table (4-18) shows the price index for carpets was the lowest index in 1963 and it reached the level of the general index by 1969. This implies an annual rate of increase of 6.4 percent in the case of the price of carpets and 1.9 percent for the general price index. The above shows that the value added in rural manufacturing could have been above that of urban manufacturing only by the difference in the growth rate of price increase i.e. 4.5 percent at the greatest. Therefore, one has to accept that the high rate of growth of the value added in the rural industries during 1963-69 is largely inaccurate and due to underestimation of value added in the early years. Nevertheless, it is possible to say that the pattern of demand and supply of carpets have an important effect on the growth of value added

Table 4-17) Distribution of Value Added by Industries and Size of Establishments During 1967-73

Industry	Rural	Small	Large - Scale	Sub - Total	Total	Rural	Small	Large - Scale	Sub - Total	Total	1973	1972
Food	(13.9)	(55.2)	(23.5)	(92.6)	(100.0)	(13.9)	(55.2)	(23.5)	(92.6)	(100.0)	(13.9)	(55.2)
Beverage	0	0	0	0	0	0	0	0	0	0	0	0
Tobacco	0	0	0	0	0	0	0	0	0	0	0	0
Textiles	(16.9)	(40.6)	(31.6)	(89.1)	(100.0)	(16.9)	(40.6)	(31.6)	(89.1)	(100.0)	(16.9)	(40.6)
Apparel	(28.1)	(71.0)	(27.6)	(95.7)	(100.0)	(28.1)	(71.0)	(27.6)	(95.7)	(100.0)	(28.1)	(71.0)
Wood & Wood Prod.	(4.2)	(63.8)	(1.0)	(69.0)	(100.0)	(4.2)	(63.8)	(1.0)	(69.0)	(100.0)	(4.2)	(63.8)
Paper	(14.3)	(40.3)	(0.4)	(55.0)	(100.0)	(14.3)	(40.3)	(0.4)	(55.0)	(100.0)	(14.3)	(40.3)
Printing & Publishing	(11.7)	(72.5)	(0.1)	(84.3)	(100.0)	(11.7)	(72.5)	(0.1)	(84.3)	(100.0)	(11.7)	(72.5)
Leather	0	0	0	0	0	0	0	0	0	0	0	0
Rubber & Rubber Prod.	0	0	0	0	0	0	0	0	0	0	0	0
Chemicals	(9.0)	(33.3)	(3.0)	(45.3)	(100.0)	(9.0)	(33.3)	(3.0)	(45.3)	(100.0)	(9.0)	(33.3)
Oil & Coal Products	(40.0)	(40.0)	(2.0)	(82.0)	(100.0)	(40.0)	(40.0)	(2.0)	(82.0)	(100.0)	(40.0)	(40.0)
Non-metallic Minerals Prod.	(14.7)	(34.5)	(0.1)	(49.3)	(100.0)	(14.7)	(34.5)	(0.1)	(49.3)	(100.0)	(14.7)	(34.5)
Metals	(45.4)	(55.4)	(2.0)	(102.8)	(100.0)	(45.4)	(55.4)	(2.0)	(102.8)	(100.0)	(45.4)	(55.4)
Non-electric- Tool & Equip.	(35.3)	(75.0)	(2.0)	(112.3)	(100.0)	(35.3)	(75.0)	(2.0)	(112.3)	(100.0)	(35.3)	(75.0)
Electric- Tool & Equip.	(34.6)	(64.4)	(0.1)	(99.1)	(100.0)	(34.6)	(64.4)	(0.1)	(99.1)	(100.0)	(34.6)	(64.4)
Electrical	(3.7)	(54.6)	(0.1)	(58.4)	(100.0)	(3.7)	(54.6)	(0.1)	(58.4)	(100.0)	(3.7)	(54.6)
Transportation	(11.1)	(75.0)	(0.1)	(86.2)	(100.0)	(11.1)	(75.0)	(0.1)	(86.2)	(100.0)	(11.1)	(75.0)
Other	(1.0)	(1.0)	(0.1)	(2.1)	(100.0)	(1.0)	(1.0)	(0.1)	(2.1)	(100.0)	(1.0)	(1.0)
Total	(12.3)	(55.2)	(23.5)	(92.6)	(100.0)	(12.3)	(55.2)	(23.5)	(92.6)	(100.0)	(12.3)	(55.2)

Note: 1 - The value and share of different industries for (10-49) and (plus 50) establishments in 1971 have been calculated and figures are very tentative. The estimates have been made according to the information available in industrial statistics of 1972 for the share of large establishments in the total output of each industry. See pages 22-26 and 46-48 in the above survey.

2 - The lower () show the share of industries in total output by industries.

3 - The upper () show the share in the total output by industries.

Source: 1. Ministry of Economy, Industrial Statistics, 1971-73.

Price Index and Annual Rate of Inflation
For Carpets and the General Index

Table (4-18)

1969 = 100.0

Price Index	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	Annual Rate of Inflation Percentage			
														1963-9	1969-72	1972-3	1973-5
Housing Furni- shings	81.8	81.9	84.2	87.0	87.7	94.2	100.0	102.0	103.1	113.3	144.0	171.3	204.2	3.4	4.2	27.1	19.0
Carpet	68.8	72.8	81.6	85.2	85.2	89.9	100.0	96.9	95.0	112.4	161.3	-	-	6.4	4.0	43.5	-
General Index	89.4	93.3	93.5	94.3	95.1	96.6	100.0	101.5	107.1	113.8	126.5	146.1	160.5	1.9	4.4	11.1	12.6

Source: BMI, Revised Price Index for Whole-sale in Iran , 1974; Annual Reports 1971-76.

at current prices. Based on the price changes, one can expect that the low growth of productivity in the rural areas, to some extent, will be compensated for by the increase in prices; therefore, rural manufacturing industries may be able to continue their contribution to the total industrial products and may more or less maintain their share in the value added. As table (4-18) shows the rise in the price of carpets during 1972-76 is far above that of the general index.

However, even if we consider that some improvement in the line of production of carpet industries has happened in the recent years, it would not have been considerable in comparison with that of real productivity in urban areas; and still the relative significance of rural manufacturing would be dependent on the significance of the income elasticity and degree of substitutibility for carpets. As far as the former is concerned, like any art craft product, the carpet is highly income elastic, but at the same time it is not considered as a luxury product so far as domestic demand is concerned. Thus, the rigidity of demand for knotted carpet would reduce the degree of substitutibility for carpets and it is unlikely that the machine made rug can become competitive in the foreseeable future.

Thanks to the high income elasticity for the art craft, the rural industries can survive while a change can be seen in other rural industries. For instance, in food industries, the share of rural value added has decreased due to an increase in the undertaking of some of the traditional rural activities, such as processing agricultural products, by capital intensive plants in urban areas. However, the minor activities such as manufacturing of parts of farm equipment and tractors, bicycles etc., has increased due to the relatively increased use of modern agricultural techniques in farming.

Urban Industries

The urban industries can be classified into small scale with fewer than ten employees and the large scale with ten and over employees. Although

this classification is not clear in the case of large scale establishments due to the range of covering, it is the only classification for which detailed industrial statistics are available.

The pattern of development of urban industries can be divided into two short periods. First, 1967-71 period when the small-scale industries were able to maintain their share of value added. Second, 1971-73 period when the share of small scale declined by 6.6 percent during two years (i.e. from 35.9 percent in 1971 to 29.3 percent in 1973) (table 4-19).

Table (4-19) shows that the share of small scale manufacturing in the urban value added has remained stable during 1967-71 period. Despite the fact that the method of production is primitive and the per worker value added is low, small scale manufacturing was able to maintain its share in the total urban value added. While the per worker value added in small scale manufacturing is well below than that of the large scale, the annual growth of labour productivity seems to be higher than that of large scale for 1967-71 period (table 4-20)

There are two factors which may be responsible for the survival of small scale manufacturing. First, the growth of value added in small scale is largely dependent on the rate of growth of employment in small establishments. As table (4-21) shows the annual growth of employment in the small scale establishment was faster than that of the large scale during 1967-71. The discrepancy in the growth rate of employment is not only insignificant, but also the fluctuation of the annual growth rate is very high - a fact which makes it impossible to draw any conclusion based on the differential growth rate. However, the share of small scale in the total employment of urban manufacturing has been as high as 68 percent and was stable during 1963-71.

The second factor is the growth of labour productivity. Although, theoretically, it may be argued that the growth of labour productivity in

Distribution of Value added By Large, Small, Traditional and
Modern Classifications During 1967-73¹

Table (4-19)

Value in Billion Rs.
(Share in Percentage)

Classifi- cation		1967			1971			1973		
		Tradi- tional	Modern	Total	Tradi- tional	Modern	Total	Tradi- tional	Modern	Total
Small	%	(69.0)	(31.0)	(100.0)	(57.9)	(42.1)	(100.0)	(66.1)	(33.9)	(100.0)
		17.1	7.7	24.8	23.8	17.3	41.1	33.4	17.1	50.0
	%	(38.3)	(30.4)	(35.5)	(38.0)	(33.5)	(35.9)	(36.8)	(21.0)	(29.3)
Large	%	(61.0)	(39.0)	(100.0)	(53.1)	(46.9)	(100.0)	(47.1)	(52.9)	(100.0)
		27.5	17.5	45.1	38.9	34.4	73.3	57.4	64.4	121.8
	%	(61.7)	(69.6)	(64.5)	(62.0)	(57.9)	(64.1)	(63.2)	(79.0)	(70.7)
Total	%	(63.8)	(36.2)	(100.0)	(54.8)	(45.2)	(100.0)	(52.7)	(47.3)	(100.0)
		44.6	25.3	69.9	62.7	51.7	114.4	90.8	81.5	172.3
	%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Note 1 - Figures in () indicate the share of different sectors in the total value added. The upper () show the share by small and large classifications while the lower ones illustrate the share by traditional and modern sectors.

Source: See table (4-17)

Growth of Labour Productivity in Urban

Small and large Establishments

Table (4-20)

Average Output Per Worker	Value in Thousand Rls.							
	1964	1967	1971	1973	Annual Growth Rates Percentage			
					1964-67	1967-71	1971-73	
Small	140	132	178	222	-2.0	7.7	11.7	
Large	386	557	699	894	13.0	5.8	13.1	
Total	222	267	390	479	6.3	9.9	10.8	

Source: For 1964-67, see Looney, R., Economic Development of Iran; for 1971 and 1973 see Ministry of Economy, Iranian Industrial Statistics, 1971 and 1973.

Distribution and Growth of
Urban Employment

Table (4-21)

Thousand persons

	1967	1968	1969	1970	1971	1972	1973	Annual Growth Rate	
								Percentages	
								1967-71	1971-73
Small	456	449	500	540	481	633	585	6.2	0.7
Large	217	245	257	264	274	303	362	6.0	14.9
Total	673	685	757	804	855	936	947	6.1	5.2

Source: Ministry of Economy, Iranian Industrial Statistics, 1968-73.

Distribution of Value added By
Size of Establishment¹

Table (4-22)

Billion Rls.

Size of Establish- ment	1967	1968	1971	1973
Rural	9.8 % (12.3)	15.3 (16.5)	23.7 (17.2)	28.9 (14.4)
Urban:				
Small (less than ten)	24.8 % (31.1)	26.6 (28.6)	41.1 (30.0)	50.4 (25.1)
Medium (10-50)	15.9 % (19.9)	20.0 (21.5)	23.2 ² (16.8)	
Large (Over 50)	29.2 % (36.6)	31.0 (33.4)	50.0 ² (36.2)	121.7 (60.5)
Total	79.7 % (100.0)	92.9 (100.0)	138.1 (100.0)	201.0 (100.0)

Note: 1 - () indicate the share in total

2 - Estimat

Source: See table (4-15)

large scale establishments should be higher than that of small scale due to their advanced technology and learning of 'know-how', it may not be reflected in the per worker value added at current prices in which the elasticity of demand plays the main role in determining the sold value of output. If small scale manufacturing faces a different pattern of demand from that of large scale, it may enjoy a higher growth rate of labour productivity at current prices, provided its products are highly income elastic and are not in competition with those of large scale manufacturing.

Actually, the type of activity of small scale manufacturing has been the main assurance of its survival. On the one hand, the difference between the products produced by the small scale from those of the large has kept them safe from the strong competition imposed on the market by large manufacturing. On the other hand, a backward linkage with the large has created new activities in the modern sector. Table (4-19) shows the share of small manufacturing by type of industries. As it appears in this table, the small scale accounts for about 33.3 percent of the value added in the urban traditional sector in 1967. They make a large contribution in food, textiles, apparel and wood products (table 4-17). Their types of products are different in each industries from those of the large. For instance, bakeries, grain milling, non-mechanised dairy factories are the main activities of the small scale establishments in food industries. Although the demand for the above mentioned industries are not income elastic, the small scale industries are faced with a fairly income elastic demand in clothing, carpets and hand made shoes. However, they could maintain their position during 1967-71; and their share of value added remained at 38 percent of total value added in the urban traditional sector in 1971 (table 4-19).

However, starting the new activities in the modern sector is the main reason for the maintenance of the share of small scale in the total urban value added. As it appears in table (4-19), the share of small scale

industry in the modern sector has even slightly improved. It implies that the rate of growth for small scale in the modern industries was faster than that of large industries. The strong backward linkages within the vehicle industry has been the most important. The share of the small scale in the vehicle industry has moved up from 7.5 percent in 1967 to 28.7 percent in 1971. The small scale activities in the vehicle industry are largely car repairing and producing simple spare parts. In this respect, some improvement in the metal products have also made a contribution to the growth of small scale industries (table 4-17).

Thus, on the one hand, as the above pattern shows the growth rate of labour productivity in small scale industry has been high, and on the other hand, the growth of labour productivity in the large establishment may have slowed down due to the limitation on the growth of the domestic market for mass production. This has been noticed by some of observers of the Iranian economy¹⁸. This particularly has been the case for some of the consumer durable goods. The decline of the growth of labour productivity in large manufacturing can be clearly seen from table 4-20 which shows that the growth of per worker output in large scale industries declined from 13 percent annually during 1964-67 to 5.8 percent during 1967-71.

However, a further break down of the establishment by number of employees shows that the medium sized industries (with 10 to 50 employees) account for 19.9 percent of urban value added while that of the large (over 50 workers) accounts for 36.6 percent in 1967 (table 4-22). Although there is no data available for the later years, an estimate can be made for the growth of employment in the large establishment. Table (4-23) shows the number of establishments by size in 1967 and 1972. If we assume no increase in the average number of workers per establishment, the growth of employed workers would be subject to the growth of the number of estab-

Classification of Large Industrial
Establishments By Number of Workers

Table (4-23)

Number of Workers (Persons)	Number of Establishments	
	1967	1972
Total:	4386	5850
10-49	3800	5230
50-99	} 586	282
100-499		243
500-999		61
1000 and Over		34

Source : Looney, R., Economic Development of Iran, p. , Table 41; see also Table (4-15).

Distribution Of Employment
By Size Of Establishment

Table (4-24)

Size Of Establishment	1967	1971
Small-Scale Fewer Than 10 Workers	456	633
%	(67.7)	(67.7)
10 - 49 Workers	60	83
%	(8.9)	(8.8)
Over 50 Workers	157	220
	(23.4)	(23.5)
Total	673	936
%	(100.0)	(100.0)

Source : see Table (4-23)

lishments. As is shown in table (4-24) no change in the pattern of employment can be discerned.

With the above pattern of employment, any change in the pattern of value added has to come from the difference in the growth of labour productivity. Since the growth of labour productivity in the medium-size establishment may not be higher than that of the small scale industries, it can be assumed to be the same. Table (4-22) shows the estimate for distribution of value added by the size of establishment in the manufacturing sector for 1971. It seems the large establishment has taken over the share of medium-size industries by 2 percent. However, this estimation is very tentative and has to be interpreted with caution. It shows a tendency rather than a declining trend although it can be explained by saying that government policy has discouraged the development of medium-size establishments.

However, during the second period, a substantial change has occurred in the Iranian manufacturing sector. Nevertheless there exist some similarities between the two periods. On the one hand, the general pattern of development with regard to the decreasing share of the traditional sector in the total industrial value added continued; the share of this sector declined by another two percent from 54.8 percent to 52.7 percent (table 4-19). Still, the traditional sector accounts for the large share of value added as well as employment. With regard to the share of small scale industries in the total traditional sector, a slight decrease (1.2 percent) can be discerned which indicates that the traditional sector is still the main area of activity of small scale industries, particularly apparel and food.

On the other hand, a decline of 12.5 percent can be seen in the relative share of the small scale in the modern sector. A sudden decline during this period and specially after the expansionary period of 1967-71 is plausible. There are two main reasons for the declining share of small scale industries. First, in 1972 and 1973 numbers of government factories

in chemical, basic metal and capital goods industries came to operation. As it appears these three groups grew up at an annual rate of 27.7, 67.2 and 53.7 respectively (table 4-17). They have largely contributed to the rapid growth of the modern sector. Also, the rapid expansion of the large industries can be seen from the high annual rate of growth of employment in this sector . i.e. 14.9 percent (table 4-21).

Secondly , during 1971-3 the growth rate of value of net output in the modern small scale industries was almost zero (table 4-19). Although they have been able to diversify their activities along with the expansion of new industries, they have lost a part of their share of value added in the older rooted industries like metal products, chemical, non-metallic and mineral and basic metal industries. Table (4-17) shows that the value of net output of the above industries which are of small scale, in absolute terms, has declined. For instance, during 1971-3, metal products declined from 4.2 to 2.4 Billion Rs., chemicals from 2.3 to 1.8 Billion Rs., and non-metallic and minerals from 4.9 to 2.7 Billion Rs. and so on (table 4-17).

This pattern indicates that the small scale industries are losing their share on those industries in which they have been producing final products, while they are expanding their activities toward the backward-linkage industries and mainly back service for modern products. A few example may make the pattern clearer. The small scale establishments have been producing soaps and washing powders for a long time which now have gradually been replaced by new brands from large industries. Similarly, there is no longer a demand for old type of tin products, old stoves and oil-lamps and so on. These products have been replaced by new brands or superior substitutes which are produced by large mass producing industries.

The change has been largely toward higher capital intensity in the small scale which necessarily develop along with the expansion of modern industries. Consequently, the rate of absorption of manpower by small scale establishments

has been affected. As can be seen from table (4-21), the number of employed workers remained unchanged during this period. This leaves the growth of small scale industries to the growth of productivity in this sector which does not shows a significant difference from that of the large industries (11.7 percent compared with 13.1 percent, table 4-20). This growth should largely be attributed to the rising of wages and prices (particularly in apparel and food industries) rather than real productivity in small scale industries.

The pattern of development of the manufacturing sector has shown that the rural and small-urban establishments have played an important role in the development of the industrial sector. Their share in the value added and particularly in employment have been significant. Moreover, the rural industries especially carpet and handi-craft industries provide the most important non-oil export which enjoys a bright future. Also, the urban-small industries have shown their ability in adapting their production to the needs of the economy and have expanded their activities along and in connection with the change in the large modern industries. However, the pattern of the manufacturing sector also indicates that the reason for the very survival and even expansion of these industries has been the nature of their production and their ability to respond to the pattern of demand along with the rising of income and changes in the pattern of manufacturing products. In other words, as we will see later on, government policy has played no significant role in encouraging these industries. Taking into account that a government in developing country should try to encourage the development of indigenous technology and labour intensity, one would expect to see the Iranian government pursue such policy if the maximum utilization of scarce resources is the main objective of government economic policy.

4-3-2 Government Policy For Development of the Manufacturing Sector

In order to examine how the government's policies have affected the above pattern of development of the manufacturing sector, we can divide these policies into two main groups:

- a) Government Direct Investment (GDI)
- b) Government Direct and Indirect Assistance (GDIA)

The latter group consists of Government Credit Policy (GCP), Government Tax Policy (GTP) and Protection Policy. However, since in our study, we are not concerned with the protection policy, we will only touch this topic very briefly despite its importance.

The main questions to be answered with regard to the effects of government policies are: a)- Whether the GDI has been in competition with that of investment in the private sector or complementary to it. b)- How the GDI, GCP and GTP have affected the capital per worker. Have they been in favour of large or small industrial establishments? What has been the importance of employment creation in the making of government policies? c- How government policies have affected the efficiency, maximum utilization of scarce resources and the market integration.

4-3-2-1 Government Direct Investment

Due to the lack of data on the disaggregated level for public and private value added (we have been able to estimate the share of the public sector for 1972-74, see p259), it is hard to explain how the pattern of development in the manufacturing sector has been affected by government intervention. However, since the pattern of output is affected by the pattern of investment in regard to the allocation of resources between the modern and traditional sectors of manufacturing, it is possible to explain the change in the pattern of value added by the relative change in the allocation of investment.

The general government's policy in regard to industrialization has been to take the initiative in modernizing the method of production in the traditional sector and undertaking new activities in the modern sector of manufacturing. As far as the traditional sector is concerned, by taking

the initiative the government could assure the private investors of a ready market for their products and encourage them in modernizing the method of production. This modernization happened largely in the textile industries after World War II. The government's initiative in sugar and canning and particularly the abolition of the government monopoly in sugar production, new investment opportunities were introduced to the private sector.

The above explanation shows that the private sector has been ready to undertake investment opportunities whenever its market is ensured by the government initiative both through GDI and through the tariff policy. The high share of GDI in the light industries during the Second Development Plan (particularly in textile and sugar industries) can be interpreted as a complementary to the government import substitution policy. This may be so, because in the early stages of development, domestic private investors are not familiar with industrial activity at a mass production level and they are not assured of the profitability of such investment¹⁹. Although the government protection policies may increase the price level and create an incentive for domestic private investors, it is not sufficient to reduce the degree of uncertainty and the potential risk raised by foreign competitors whom are believed to produce a high quality product. In this circumstance, government initiative may make the private sector assured of the domestic market by accepting the primary risks and by changing (gradually) the consumers' tastes from the foreign goods toward domestic products. To this extent, that government investment can be regarded as complementary which reduces the degree of market risk for private investors. With the above explanation, one can say that the pattern of government investment has been affected by the private sector's understanding of the readiness of the market and the undertaking of necessary investment in the following of the government initiative in particular industries. In this respect, the government investment policy has changed

from activities which are understood by the private sector to be assured to new activities which are not yet fully realized by private investors. In other words, the pattern of investment has changed gradually from traditional to modern industries.

Table (4-25) shows the allocation of government investment to the traditional and the modern sectors of manufacturing since 1955. A radical change appears between the three development plans; while the traditional manufacturing absorbed around 72 percent of the GDI in the manufacturing sector during 1955-62, its share declined to 10.8 percent during the Third Plan and about 6 percent for 1968-71. This implies that the government has left the traditional sector to the private investors. Particularly, if it is considered that the share of public investment in the total investment in the manufacturing has increased from 29.2 percent in the Third Plan to 40.8 percent in the Fourth Plan, one can clearly see that the government policy has been the leading of the private sector to new activities both in the traditional and modern sectors (table 4-26).

As table (4-26) shows the investment in the traditional sector accounts for 66.5 percent of total investment in the manufacturing sector during the Third Plan while its share in the Fourth Plan is not more than 34.2 percent. The share of GDI in the traditional sector was very low during 1962-72 i.e. around 6 percent on average. Realizing the high share of the GDI allocated to the traditional sector during 1955-62, its share relative to the total investment in the traditional manufacturing has been far higher during this period.

The above pattern shows that there is a clear tendency toward investment in modern manufacturing both on the part of the private and public sector. In this respect the GDI has played the leading role.

When the type of activities in the private and the public sector is considered, a relative difference can be observed. This would reduce the

Direct Government Investment In
Manufacturing By Activity Since 1955 ¹

Table (4-25)

Billion Riels

	Second Plan 1955 - 62	Third Plan 1963 - 67	Fourth Plan 1968 - 72	1973 - 76
Modern	2.1 (28.0)	16.6 (89.2)	94.6 (94.1)	160.7 (85.6)
Traditional	5.4 (72.0)	2.0 (10.8)	5.9 (5.9)	27.1 (14.4)
Total	7.5 (100.0)	18.6 (100.0)	100.5 (100.0)	187.8 (100.0)

Note : 1- () indicate percentage share in total.

Source : BMI, Annual Reports, 1965 - 76; Plan Organization, Final Reports of Second and Third Plans.

Distribution Of Investment In Manufacturing
Sector By Sectors and Activities ¹

Table (4-26)

Billion Riels

Sector	Third Plan 1963 - 67			Fourth Plan 1968 - 72			1973-76
	Modern	Traditional	Total	Modern	Traditional	Total	Total
Public	(89.2)	(10.8)	(100.0)	(94.2)	(5.8)	(100.0)	-
	16.5	2.0	18.5	94.6	5.9	100.5	302.0
	(78.6)	(4.8)	(29.4)	(57.7)	(6.9)	(40.3)	(46.8)
Private	(10.2)	(89.8)	(100.0)	(46.5)	(53.5)	(100.0)	-
	4.5	39.8	44.3	69.2	79.4	148.6	343.1
	(21.4)	(95.2)	(70.6)	(42.3)	(93.1)	(59.7)	(53.2)
Total	(33.4)	(66.6)	(100.0)	(65.8)	(34.2)	(100.0)	-
	21.0	41.8	62.8	163.8	85.3	249.1	645.1
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)

Note : 1- () indicate the percentage share in total sector activity. The upper () show the share in total public or private sector. The lower () show the share in modern or traditional sector.

Source : BMI, Annual Reports, 1965 - 76; Plan Organization, Final Report of Third Plan.

possibility of competition between the private and the public sector as far as the market absorption is concerned. Although at the beginning of the industrialization the GDI in the manufacturing was mainly allocated to the traditional sector, government activities were limited to the textile and sugar industries which accounted for 98.6 percent of the GDI in the traditional sector. In modern manufacturing, cement industries accounted for 75 percent of the total GDI in the modern sector²⁰.

During the Third Plan, a clear change can be observed on the part of modern industries while the expansion and development of the existing manufacturing in the traditional sector made no change in the pattern of activities. Government activities in the modern sector shows a clear tendency toward capital intensive industries which can be classified into oil-oriented industries, that is chemical and petro-chemical industries, and heavy industries mainly basic metal. This pattern has continued during the Fourth Plan.

However, in addition to the expansion of the above industries, new investment in the machine and tool industries can be observed. As table (4-27) shows while the government has major contribution to the three sectors of manufacturing that is chemical, basic metal and mechanical and electrical machine and tool industries, other industries are left entirely to the private sector. The GDI in chemical and machine and tool industries accounts for 71 percent of the total investment in these sectors while the GDI in basic metal is as large as 99.4 percent of the total investment in this sector. On the one hand, the GDI policy would result in a monopolistic conditions in these particular modern industries, on the other hand, it would keep other industries out of competition with the government.

However, due to the time lag between the investment and output, especially in the government capital intensive industries, because of the long gestation period the pattern of value added has not reflected the same

Distribution Of Investment In Modern Manufacturing
By Major Sector During Fourth Plan

Table (4-27)

Million Rials

Type Of Activities	Public (1)	Private	Total (2)	% $\frac{(1)}{(2)}$
Modern Sector:				
Rubber & Rubber Products	-	6902	6902	-
Chemicals	24269	9840	34109	71.1
Oil Products	-	2372	2372	-
Non-metallic Mineral	-	13604	13604	-
Basic Metal	59515	265	59880	99.4
Metal Products	-	14108	14108	-
Non-electrical Machinery	} 10779	} 4280	9685	} 71.6
Electrical Machinery			5374	
Transport Equipment	-	16578	16578	-
Miscellaneous	-	1298	1298	-
Total	94563	69247	163810	57.7

Source : Ministry Of Economy, Industrial Statistics Of Iran, 1972 ; and
BMI, Annual Report, 1972.

Distribution Of Value Added By Major Sector
In Manufacturing & Mining
(at Current Prices)

Table (4-28)

Billion Rials

	1972	1973	1974
(1) Private	160.5	215.1	284.7
(2) Large-Scale ¹ Establishment (plus 10)	(88.0)	(121.6)	(175.7)
(3) Public ²	11.0	16.8	28.0
(4) Total	171.5	231.9	312.7
Percentage (3)/(4)	6.4	7.3	9.0
Percentage (3)/(2)	12.5	13.8	15.9

Note: 1- Total Large-Scale including public and private.

2- For calculation see appendix (A).

Source : BMI, Annual Report, 1974; Ministry Of Economy, Iranian Industrial
Statistics, 1974.

pattern as that of pattern of investment up to 1972. Most of government manufacturing reached the first stage of production in 1972 and thus table (4-19) does not show the full share of government industries in the modern sector. As table (4-28) indicates the share of public sector in the total mining and manufacturing value added has increased from 6.4 percent in 1972 to 9 percent in 1974. With the above pattern of investment a growing share by the public sector in the total value added would be expected in the near future.

Although the pattern of the GDI has remained the same during the Fourth and the Fifth Plan, a clear emphasis on the arms industries can be seen in the projection of the Fifth Plan. Around 42.4 percent of the GDI in the chemical and petro-chemical, mechanical and automotive industries has been allocated for military industries while on the non-military industries no change can be seen and the government has limited its activities to the expansion of the existing factories that is Tabriz and Arak Machine and Tool Factories and Arak Tractor Factory.²¹

With the above change in the pattern of investment, the government is moving away from the industries it has dominated and is leaving more room for the private sector in the non-military industries. Private sector investment would be dependent upon the market capacity for the tool and machine products. The effects of the above change will be seen in the long run, if the time lag between investment and production is considered.

However, the pattern of investment as pictured above shows that the modern industries would produce a large share of the value added in the future. With the increasing share of the public factories in the total value added, the government would have the leading role in the relative change. The relative change in the pattern of value added and the pattern of investment should also show the relative change toward large establishments coming with the development of the modern sector and the moderniza-

tion of traditional manufacturing.

The GDI has been totally in large scale establishments due to factors mentioned earlier. In 1972, about 72 government factories were in operation and all of them had over 50 employees. 10 out of 35 factories with over 1000 workers are publicly owned.²² The share of government employees in the large manufacturing sector is around 41 percent of large scale manufacturing or 30 percent of the establishments with over ten workers (tables 4-23 and 4-31). This shows that the potential share of the public sector in the large scale establishment is large and their development is dependent upon the government pattern of investment with regard to the manufacturing sector.

However, the high share of public employment should not be interpreted as labour intensity of public manufacturing in Iran. The above pattern largely can be attributed to the rapid expansion of the public sector which accounts for 40 percent of the total investment in the manufacturing sector during 1968-72. On the contrary, public manufacturings are highly capital intensive. As table (4-29) shows the capital per worker in the public manufacturing is as high as 3346.7 thousand Rls. in comparison with 655.8 thousand Rls. at national level (510 percent higher). Even in comparison with the large private establishments (over 50 workers), the public sector is highly capital intensive i.e. the capital per worker in the latter is 186 percent higher than that of the former. More importantly, due to the high share of government investment in total industrial investment, the high capital intensity in the public sector has considerably increased the capital per worker at national average (the capital per worker in the private sector is around 425.2 thousand Rls. which is well below the national level). Also, the available data in table (4-30) indicates that capital intensity has rapidly risen along with the expansion of the modern industries during 1962-72 i.e. the capital per worker rose from 215.7

Distribution of New Investment, New
Employment and Capital Per Worker By
Size of Establishment During 1968-72

Table (4-29)

	New Investment Billion Rials	New Employment (,000) Persons	Capital Per Worker Thousand Rials
Public Sector ¹	100.4	30.0	3346.7
Private Large (10 Plus)	79.0	56.0	1410.7
Total Country	249.2	380.0	655.8

Note- 1- New employment in the public manufacturing sector during 1967-72 is 39500 persons. Here, 30,000 is estimated for 1968-72.

Source: Plan and Budget Organization, Statistical Year Book of Iran 1346 (1967) and 1351 (1972); Ministry of Economy, Iranian Industrial Statistics, 1968-72.

New Investment, New Employment and
Capital Per Worker in the Manufac-
turing Sector During 1962-72

Table (4-30)

Periods	New Investment Billion Rials	New Employment (,000) Persons	Capital Per Worker Thousand Rials
1962-67	70.0	324.5	215.7
1968-72	249.2	380.0	655.8
1962-72	319.2	704.5	453.1

Source: Ministry of Economy, Iranian Industrial Statistics, 1968-72.

thousands Rls. during 1962-67 to 655.8 thousands Rls. during 1968-72. This increase was mainly due to government investment in the capital intensive industries.

Despite the high capital intensive nature of public investment in the manufacturing sector, it has appeared to have an insignificant contribution to the value added at the national level. For instance, the value added of public manufacturing accounted for only 6.4 percent of the total value added in the manufacturing sector or 12.5 percent of the large establishments (10 plus). Comparing the per worker output in the public and the large (over 50) private establishment, it appears that the latter produce a higher per worker output than the former i.e. 377.4 thousands Rls. in comparison with 115.8 thousands Rls. (table 4-31). There are a number of reasons for such a low output and value added in public manufacturing:

a)- Most of the government investment has been in projects with a long gestation period, mainly in capital goods and intermediate industries. Therefore, there is a long gap between the investment and output. Some of these projects started their production in 1971-2, consequently, it may not be surprising to see some under-utilization of capital in the early years of operation. As table (4-28) shows the share of public manufacturing in the total industrial value added has risen from 6.4 percent in 1972 to 9 percent in 1974 (or from 12.5 percent of the large industries to 15.9 percent) which indicates a better utilization of the capacity.

b)- Apart from the under-utilization of capital due to the lag factor, there exists an under-utilization due to mismanagement. If we use the profitability as a criterion for efficiency, some of the government industrial companies, both in the traditional and modern sectors, may not fulfill the criterion. Although the matter needs thorough micro-economic analysis, here, it is sufficient to state some examples as appear in table (4-32). Apart from the tobacco company which enjoys the monopoly of tobacco production, the

Per Worker Value added in Large Establish-
ment (Over 50 Workers) By Major Sectors in

1972(at Current Prices)

Table (4-31)

Sectors	Private	Public	Total
Value Added(Bil. Rls.)	48.8	10.5	59.3
Number of Workers (,000) Persons	129.3	90.7	220.0
Per Worker Value- added (,000)Rls.	377.4	115.8	265.5

Source: See tables

Profits and (Losses)¹ of Selected Major
Government Industrial Companies during

1972-5

Table (4-32)

	Million Rials			
	1972	1973	1974	1975
Mazandarn Textile Company	179.7	174.0	192.8	251.3
Textile Companies ²	(69.7)	(35.4)	-	-
Tobacco Company	5993.0	5721.4	6223.1	6486.1
Varamin Sugar Company	(31.2)	(52.9)	(90.6)	(8.2)
Ray Cement Company	(59.3)	(66.8)	(65.3)	(114.5)
Steel Company	(5078.1)	(4164.3)	-	-
Arak Machine & Tool Company	(238.9)	(382.9)	(288.9)	(549.9)
Aluminium Company	(53.9)	(603.0)	63.3	(401.9)
Tractor Company	27.8	265.5	295.2	314.4
Tabriz Machine & Tool Company	(121.3)	(360.5)	(423.3)	(317.7)
Petro-chemical Company	(151.2)	(34.7)	63.2	660.4

Note- 1- Figures in () indicate losses

2- This item includes 13 public textile companies whose financial performance came under a supervisory company. Therefore, their separate financial performances do not come in Budget.

Source: Budget Acts for 1353 to 1356 (1974-1977).

others either have produced substantial losses or have operated at a marginal profit.

c)- Some of the government capital goods industries have suffered from under-utilization of capacity in the early years of operation. In so far as this under-utilization is due to market limitation, it may remain as an important factor causing the high cost of production in these industries. In other words, the lack of sufficient demand for such products may reduce the possibility of using an economic of scale. In this respect, there are two factors to be considered;

1- The expansion of capital goods industries is largely dependent on the expansion of the consumer goods and particularly consumer durable goods industries. Without any change in the pattern of distribution of income, the Iranian economy may have reached the limits imposed by the income-elasticity of demand for consumer goods; this would reduce the demand for intermediate and capital goods. Apparently, this has been the case with the failure of the engineering firm in Iran during 1972-77. For instance, the Tractor Company which produces final products has been able to improve its operation while Arak and Tabriz Machine and Tool Companies are still producing annual losses after six years of operation (table 4-32). Moreover, the possibility of export for capital goods is very low and the domestic market has to be considered as the only demand. On the contrary, the development of petro-chemical industries is largely dependent on the international market as they had originally been considered as export oriented industries (see also chapter 8).

2- There exists a technological problem with regard to adaptation of Eastern European technology to Western technology. The government capital goods industries are based on Eastern European technology while those consumer goods industries in the private sector from which the demand for capital goods should come are based on Western technology. Not only may the

linkage between the Iranian private sector and the western countries be strong enough not to accept a switch towards the Eastern European technology, but also, the difference in technology may make such adaptation difficult and may hamper the deepening of the process of production. This would reduce the possibility of bridging the existing gap within the manufacturing sector and strengthening the linkages within this sector.

4-3-2-2 Government Direct and Indirect Assistance

Provision of Credit (GCP)

While all the GDI has been in the capital intensive industries, the government assistance and credit have encouraged capital intensity in the private sector. The government assistance either directly through the Plan Organization or indirectly through the industrial banks has been allocated to the large establishments.

The government assistance through the Plan Organization was around 5 percent of the total private investment during 1962-72. It moved up to 15 percent during 1973-76 along with the rapid increase in government revenue (table 4-33). However, government assistance through the Plan Organization has not been the only government credit provided for the encouragement of industrial activity in the private sector. The main credit has been provided through the banking system and particularly the industrial banks which act on the part of the government. The distribution of loans through the industrial banks by the different industries and by the size of establishment would show to what extent the government has encouraged capital intensity in the manufacturing sector.

There are four sources of financing for the industrial sector, the Bazaar, the commercial banks, foreign investors and industrial banks. Table (4-34) shows the total private investment in manufacturing and mining and

the share of different sources of finance during 1962-76. It indicates that at least around 18.8 to 20.3 percent of the needed funds in the industrial sector have come from the traditional non-bank sources (mainly the Bazaar). During this period a relative change can be seen in the relative importance of commercial and industrial banks. While the share of the former has declined from 54.6 percent during 1962-72 to 42.7 percent during 1973-76, the share of the latter has risen from 20.5 percent to 32.7 percent. This relative change has an important implication with regard to the appropriateness of the credit for industrial activities. Here, we will briefly examine the nature of the first two sources and a detailed examination of the industrial banks' activities will ensue.

The Bazaar which is an unorganised traditional money market provides short-term loans with a maturity of 3 to 9 month for financing trade, real estates and building, and a part of industry's working capital. Since no specific item of collateral is needed and the process of transaction is informal as well as familiar to both lenders and borrowers, the Bazaar has remained as the main source of fund to small scale industries, despite the high rate of interest charged on loans (usually 200 percent higher than that of commercial banks²³).

Commercial banks are largely engaged in a similar activity to that of the Bazaar and supply short-term funds with a maturity of less than a year at a moderate rate of interest usually around 12 to 14 percent. Contrary to the Bazaar, commercial banks require a high collateral usually about double the amount of the loan. Due to the high collateral needed for the acquisition of a loan, even the large industrial units find themselves unable to provide such collateral if more than one or two loans are needed.²⁴ The small scale industries are not able by a long way to fulfill the necessary conditions. This and the low credit worthiness of small scale industries make them unattractive to the commercial banks. Therefore, one can

Disbursement of Plan Organization For
Industry and Mines During The Third and
Fourth Plans and 1973-76

Table (4-33)

Billion Rls.

	Third Plan	Fourth Plan	1973-76
Direct Govern- ment Investment %	19.6 (81.7)	104.5 (92.4)	240.8 (74.5)
Assistance to the Private Sector (1) %	4.4 (18.3)	8.6 (7.6)	61.4 (25.5)
Total %	24.0 (100.0)	113.1 (100.0)	302.2 (100.0)
Ratio of $\frac{1}{2}$ Pri- vate Investment		5.0	15.0

Source: BMI, Annual Report, 1965-76; Plan Organization, Final Report of Third Plan.

Sources of Finance For Private Investment
During 1962-76

Table (4-34)

Billion Rls.

	1962-72	1973-76
Total Private Investment %	220.3 (100.0)	404.3 (100.0)
Financing:		
Industrial Banks %	45.3 (20.5)	132.3 (32.7)
Commercial Banks %	120.5 (54.6)	172.8 (42.7)
Foreign Investment %	13.5 (6.1)	17.2 (4.2)
Non-Bank Sources %	41.5 (18.8)	82.0 (20.4)

Source: BMI, Annual Report, 1965-76; Plan and Budget Organization, Third and Fourth Plans.

Share of Different Industrial Banks in Total
Credit

Table (4-35)

	1962-72		1973-76	
	Value in Billion Rls.	Percen- tage	Value Billion Rls.	Percen- tage
IMDBI	32.7	74.0	80.9	60.9
ICB	9.6	21.7	42.2	31.7
IGF	1.9	4.3	9.8	7.4
Total	44.2	100.0	132.9	100.0

Source: See Table (3-34).

assume that the limited funds supplied by the commercial banks benefit large scale manufacturing (the main commercial bank which supplies industrial loans is Bank Melli Iran, the government owned bank).

presumably, the industrial banks provide the most suitable type of credit. These banks supply medium and long term loans which are the most appropriate for the industrial sector, therefore, their role is very important in the execution of government credit policy. There are three main different industrial banks, Industrial Guarantee Fund (IGF, later it was transferred to Omran Bank, government commercial bank), Industrial Credit Bank (ICB) and Industrial and Mining Development Bank of Iran (IMDBI).

The IGF was founded in 1962 with the object of serving small industries. The maximum loan was determined at a level of 5 Million Rials per borrower which was later raised in order to serve the medium sized loans. IGF has received some loans from the Plan Organization which has been lent at an interest rate of 2.5 percent. However, Omran Bank has followed a general commercial bank policy for its allocation of credit to industrial units i.e. requiring a substantial collateral, about 200 percent, Also, its poor service and bureaucratic procedure (the number of branches are limited and the loans must be approved by the Head office in Tehran) has made the utilization of such fund by small scale industries very difficult. Particularly, the IGF fund is less than sufficient; it accounted for 4.6 percent of the total credit provided by the industrial banks. during 1962-72. However, more attention has been paid to the IGF during 1973-76 when the government has been able to allocate a large sum of money to this fund; its share has risen to 7.4 percent (table 4-35).

The rural industries are in an even worse position with regard to government financial assistance. The IGF has concentrated its activities in the urban areas. Apart from the allocation of the Plan Organization for the centralization of the carpet industries which is very insignificant,

the required credit has been provided through the unorganized money market. However, a small amount has been made available through rural co-operatives for the rural industries. In 1972 one Million Rls was allocated to handicrafts and carpet weaving which was less than 0.0001 percent of total co-operative credit and well below the required credit²⁵. Similar to the urban small scale industries, the rural industries have to pay a high interest rate on loans, although the interest charge may be hidden due to advanced sales in most cases. Lack of cheap loans and an organized money market has reduced the share of rural families in the increased value added in rural manufacturing. As the consequence, the handi-craft producers and carpet weavers are in the weak bargaining position. An estimate for 1967-72 reckons that carpet prices rose at the rate of 12 to 20 percent annually while wages in the carpet industries rose by only 5 percent²⁶.

While the government has not provided the necessary credit for the development of the urban-small and rural industries, the IMDBI and ICB have concentrated on large projects and have provided medium and long term loans. Both banks follow more or less the same policy with regard to evaluation of projects and charge a similar rate of interest around 9 to 10 percent. The only difference which can be seen between the above two industrial banks is that the IMDBI's minimum loan is higher than the ICB's (5 Millions Rls. compared with 3 Million Rls.) and the credit granted by the former is more diversified. The ICB has concentrated on two main industries, food and textiles which account for 90 percent of its credit. These two banks account for around 95 percent of the total credit granted by the industrial banks, of which the IMDBI has the largest share i.e. 70 percent (table 4-35), Therefore, it is the IMDBI policy which determines the government's credit policy.

The IMDBI's objectives as declared by the bank have been to stimulate industrial development by assisting in the creation, expansion and

modernization of private firms by encouraging and sponsoring participation of private capital, local and foreign in such firms²⁷. The bank has pursued its objectives with different degrees of emphasis. It has largely provided long and medium term loans while its participation in the share capital of companies has occupied a second place and sponsoring and under writing have had a marginal effect.

In its policy, the IMDBI has clearly financed the large scale establishments. The minimum amount of credit is determined at a level of 5 Million Rls. which has ruled out the accessibility of the IMDBI's fund to small and even medium scale establishments. A large share of application for loans have been rejected on this ground. As table (4-36) shows during 1959-75, only 1.5 percent of signed loans have been allocated to the under 15 Million Rls. bracket while the group over 150 Million Rls. accounts for 70.9 percent of the total signed loans. Not only has the share of the lowest bracket been low, but there also exists a clear and significant tendency toward financing highly capital intensive projects. The share of the lowest bracket has declined from 6.3 percent during 1959-70 to almost zero in 1975, while the share of the highest bracket has increased from 33.6 percent to 91.9 percent. More importantly, the average loan in absolute terms in the highest group has risen from 218.2 Million in 1959-70 to 736.9 Million Rls. in 1975(table 4-36). The above shows that the IMDBI not only has been financing the large capital intensive industries, but it has also responded sharply and has accelerated the process by reducing the share of smaller loans in the total credit.

The financing of capital intensive projects has not been limited to a special industry, but as appears in table (4-37) these projects have spread across the board in whatever industry that the pattern of protection and the potential profitability has been favourable. While in the early years of development of IMDBI (1961-2) financial constraint had

IMDBI's Classification of Signed

Loans By Size

Table (4-36)

Million Rls.

Size of Loan Million Rls. From Up to		1959-70	1975-76	1959-76	Average Loan	
					1959-70	1975-76
	15	1182.8	11.8	1450.5	9.6	5.9
	%	(6.3)	(-)	(1.5)		
15	25	1275.4	104.5	1977.7	20.9	17.4
	%	(6.7)	(0.3)	(2.1)		
25	45	2275.1	711.7	4451.1	34.0	33.9
	%	(12.0)	(2.1)	(4.7)		
45	75	2918.6	566.1	6371.8	56.1	56.6
	%	(15.4)	(1.7)	(6.7)		
75	150	4914.8	1341.8	13374.7	104.6	103.2
	%	(26.0)	(4.0)	(14.1)		
150 and Over		6326.5	30949.0	67164.9	218.2	736.9
	%	(33.6)	(91.9)	(70.9)		
Total		18893.2	33684.9	94790.7	49.9	358.3

Source: IMDBI, Annual Report, 1971 and 1975-6.

Classification of IMDBI's Financial
Assistance to the Industrial Sector
By Activity During 1959-76

Table (4-37)

Type of Activity	Value of Loans Million Rials	Percentage
Consumer Goods	28889.8	36.5
Food	9658.2	12.2
Textiles	17498.9	22.1
Wood	1152.6	1.5
Leather	580.1	0.7
Intermediate Goods	32120.9	40.6
Paper & Printing	3101.1	3.9
Rubber	1719.2	2.2
Chemicals	2144.6	2.7
Petroleum Products	590.7	0.8
Non-metallic & Mineral	13578.7	17.1
Metal Products	10986.6	13.9
Basic Metal	-	-
Capital Goods	18167.9	22.9
Industrial Machinery	506.2	0.6
Electrical Machinery	7519.1	9.5
Transport Equipment	8868.6	11.2
Miscellaneous	1274.0	1.6
Total	79178.6	100.0

Source: IMDBI, Annual Report, 1971 and 1975-6.

limited industrial loans to the main existing industries, textiles and food, which accounted for 50 percent of the assigned loans²⁸, the bank has rapidly expanded its loans to other industries during 1959-75. During this period, on average, around 36.5 percent of the total loans allocated to the manufacturing sector have been in the consumer goods industries, 40.6 percent in the intermediate industries and 22.9 percent in the capital goods industries. In comparison to the pattern of protection(see the section of protection policy pp285 , table4-39), the IMDBI loans to different industries show a similar pattern, although not solely affected by the protection policy. In early 1960's when consumer goods industries received around 82 percent of the tariff protection, this group also accounted for the largest share of industrial credits (50 percent for textiles and food). With the increase in the protection of other groups, for example intermediate industries (from 11.8 percent in 1965 to 21.6 percent in 1970, see pp 285), the share of IMDBI's credit to this group increased rapidly (see table 4-37). Although the loan has been spread across the board, the relative stress on various food processing activities ranging from vegetable oil to fruit canning, textile fabrics for more expensive goods types of products or for synthetic yarns, and consumer durable goods like radios, refrigerators, TV and so on²⁹, indicates that there has been a strong tendency toward financing those industries which are oriented toward resource availability and import substitution. It is also noticeable that the only industries which have received relatively small share of the credit are either those with substantial government investment like the basic metal, petro-chemical and machine and tools industries, or those with a large traditional component in which the small scale establishments play a dominant role.

Although the above pattern of credit shows that the IMDBI's credit policy has, to some extent, followed the pattern of protection, it has also

been affected by the profitability consideration and the government social cost benefit criteria. On the one hand, the IMDBI which is a private bank and working according to world bank policy, has to consider the Internal Rate of Return (IRR) as the method of evaluation of projects. In this way, the IMDBI ensures the profitability of the projects and minimizes the risk on its loans. On the other hand, the government, which provided 63 percent of the total share capital at the beginning of IMDBI's operation and has also accounted for around 40 percent of the total IMDBI's fund³⁰, can influence the process of evaluation through its licensing system. In order to apply for a loan from the IMDBI, entrepreneurs have to obtain a "commencement licence" from the Ministry of Economy. In this way, the Ministry of Economy can determine the initial eligibility of an entrepreneur and a project before application can be made for a 'subsidized' loan. Therefore, it is assumed that the social cost-benefit of projects will be taken care of by the Ministry of Economy before projects are submitted for a loan to the IMDBI. The extent to which the government can affect the pattern of credit in the manufacturing sector depends on the degree of effectiveness of the government licensing system. In practice, not only has the licensing system no effect on the direction of the pattern of credit as will be explained below, but also, since there are a large number of choices for the IMDBI, the most socially desirable projects can be easily rejected on private profitability basis and the degree of effectiveness of the licensing system will be limited by the adverse judging of the IMDBI. Practically, it is the IMDBI which from time to time suggests a package of promotional projects to the Ministry of Economy the feasibility of which is already assured. Therefore, the licensing system, in this respect, may have little practical use for ensuring or exerting the general objectives of government policy.

However, the effectiveness of the licensing system, which is assumed

to take care of the social cost-benefit consideration, is largely dependent on the efficiency of the administration in using the social cost-benefit criteria. Theoretically, the government is able to control the minimum size of establishment, type of activities and the location of industries and encourage the integration of the domestic market through its licensing system. Although there is no legal requirement, any entrepreneur who wants to benefit from government promotional policies with regard to an increased protection against competing foreign goods, tax and tariff exemption, import permits and subsidized loans must obtain a license or 'commencement permit' issued by the Ministry of Economy. Not only has this system of licensing little practical effects on the control and the direction of the pattern of credit, employment and production, but it may also create reverse and undesirable effect on these patterns because of the following reasons:

a)- The licensing system has pursued too many objectives, too broad and sometimes contradictory without specific criteria. Up to 1970, the evaluation of projects was more or less arbitrary. It is only since 1970 that the government has introduced some basic criteria to ensure a deepening industrial process and to promote industrial employment. First, a minimum value added requirement at a level of 35 percent of the value of output has been set up. Second, a 65 percent ratio has been determined for the minimum domestic content of any newly licensed products. In other words, the import content must not exceed 35 percent of the value of the products³¹.

The first condition is to serve its function for encouraging employment, but this condition could well be an incentive to increase the relative share of profit in the total value added. This is likely to be the case when the capital has been undervalued due to the subsidized loans available to large scale establishments and it may well encourage capital intensity. Realizing this problem, the government has modified the criteria by specifying the non-profit component of value added at a rate of 20 percent

of ex-factory price. Still, not only the over-valuation of the non-profit component is a common practice in order to avoid tax on profit, taking into account that the average non-profit component of value added in the large industries in 1972 was around 20 percent of output,³² the above criterion can only ensure the maintenance of the existing level of employment and it may not encourage labour intensity in the industrial sector. As far as the second criterion, which is to encourage the deepening of the process of production, is concerned, it does not consider the import component of domestic inputs and it may only have a marginal effect rather than determining the direction of development of the industrial sector. Altogether, the licensing system, in practice, has ended into a book of selected projects. As one observer of Iranian economy has concluded " ..., the paradox is that recourse to the book implies discrimination against all projects or all activities which do not fit the book."³³

b)- Since the licensing system grants financial and economic privilege to those who are able to obtain it and it is not a requirement for commencing industrial activities, it may discriminate against the small scale establishment. Taking into account that the administrative procedure is complex, time consuming and difficult, one may assume this privilege will be limited to particular industrialists familiar with the procedure and especially available to large establishments which are able to deal with the bureaucratic system.

c)- It is assumed that the licensing system would reduce the unnecessary competition which may result in over production and lowering the minimum economic size of establishment below what is considered optimal for the utilization of the economic of scale. Therefore, the number of projects in each industry is determined by the Ministry of Economy. If several prospective investors apply for licensing in excess of the capacity considered

desirable, the question of investor selection will arise. The more profitable a license, the keener will be the competition. In these cases, "the general tendency has been to favour those investors who have capital of their own, adequate to take up a reasonable share of the financing required, whose technical know-how and managerial capability are already established, or who can be counted upon to provide these through their relation with foreign investors."³⁴ In this way, by obtaining licenses in a particular field of industry, prominent industrialists would protect their position by preventing new comers to the field. This would result in a monopolistic or oligopolistic situation and concentration of economic power within the industrial structure, particularly, in those fields in which the number of licenses has been limited due to the minimum economic size consideration.

The above analysis of the licensing system indicates that not only has the government not been able to correct the distortion created by the profit consideration of the IMDBI, but it has also reinforced the process by more distortion with regard to the creation of a monopolistic situation and discrimination against small scale establishments. Also, it was shown that the licensing system has not been able to use cost-benefit criteria and has undermined the employment creation. The expansion of small and medium size establishments has suffered from a relative lack of capital at the preferential rates both due to the ICB and IMDBI credit policies and the government licensing system. Overall, the government has changed the relative factor proportion by cheapening capital relative to labour and has encouraged the capital intensive industries against small scale and labour intensive industries.

Government Tax Policy (GTP)

Taking into account the effect of oil revenue on the structure of the Iranian tax system (see chapters 6 and 8), the government of Iran more than any other developing country has been able to grant enormous tax incen-

tives for investment in newly established and expanding industries as well as for promotion of exports. However, there is no comprehensive analysis to measure the degree of effectiveness of such tax incentives. While the structure of the tax incentive in Iran may indicate that it would have no significant effect on the reallocation of resources and directing investment towards a particular planned field of the economy, it is a financial loss to the government.

Generally, tax incentives are granted in the form of a tax holiday for 5 to 10 years to all newly established productive industries as defined by the Ministry of Economy. The published industrial table, which indicates those industries which do not enjoy the tax holiday, covers only a few industries including alcoholic beverages, chewing-gum and ice-cream factories, cosmetics and few others (see chapter 6). Therefore, all industries receive a 100 percent tax holiday if they operate outside a 120 Kilometers radius of Tehran (they receive 50 percent tax holiday if they are located inside 50 Kilometers of Isfahan) (see chapter 6). The tax incentive as such may be considered as desirable for the geographical distribution of investment. But, since the prerequisite to a tax holiday is an operation license, the government can exert its policy through licensing which has prohibited certain areas for new industrial plants or even expansion of established plants (including the Tehran zone). Thus a tax incentive is neither necessary nor practical when the geographical distribution is controlled through direct measures.

However, tax holiday by its nature has a limited effect on the stimulation of industrial development. In the early years of a plant's operation, profit are very low and very often losses may incurred which reduce the incentive effect of a tax holiday. Particularly, since the losses can be carried forward for only three years, the losses during the first two years of a company's operation cannot be used as an offset against profit

earned after the five years tax holiday. While the incentive effects of the tax holiday to each individual firm may be insignificant, it will increase the rate of return of capital if the tax holiday is granted to a large number of firms in different industries as in the case of Iran³⁵.

This would be an incentive to increase the tendency toward capital intensive industries. This, planned or unplanned, objective has been pursued also by other forms of tax incentives:

- 1)- Profit reinvested in new factories is exempted from income taxation provided the amount exceeds 5 percent of the plant's fixed assets (see chapter 6).
- 2)-If a company's capital is divided exclusively into registered shares, held by no less than 100 shareholders, none of whom hold more than 10 percent of equity, the company is exempt from the basic 10 percent corporate income tax. In addition, 15 percent of taxable profits is exempted if a company's share is quoted on the stock exchange (see chapter 6).
- 3)-Income derived from interest paid on deposits with the banking system and the interest paid on the government bills and bonds is exempted from income tax (see chapter 6).
- 4)-Income derived from the export share of a business is entirely exempted from income tax. Also, imported materials and components entering into these exported products are eligible for drawbacks on the import duties paid (see chapter 6).

The first three can encourage the capital intensity in different ways. By granting tax incentive to profit without considering tax incentive for a number of employed workers, the tax incentive may discriminate against labour intensive industries. Tax incentive has also been used for the improvement of the capital market which ultimately will lead to cheapening the capital and therefore encourage capital intensity. Obviously, capital intensity is a sign of the development of large industries which

has also been promoted through encouraging the corporate form of organization. Therefore, the government policy has largely been in favour of the development of large scale and particularly capital intensive industries.

The fourth indicates that the government of Iran like any other country has encouraged exports of any kind through tax incentives. However, the degree of effectiveness of such policy depends on the structure of the protection policy and the structure of the domestic market. It is true that the exemption of exports from corporation tax may remove some of the bias against exports created by the protection policy. This tax incentive will be effective as export promotion only when corporations are not able to pass on the tax burden (which the corporation is subject to pay against its domestic share of sale) to the domestic consumers. The tax burden can not be passed on to the consumer only if two conditions are fulfilled at the same time. First, the price of the product in the domestic market should be determined in the full competition in which the price is equal to the average cost of production. Second, this price should be equal to the c.i.f. price of the same product plus the tariff protection. Under these conditions an equilibrium can be created between domestic and international markets in which any increase in price from the domestic producer will result in losing a share of the market to foreign competitors provided the protection rate is not changed. However, if the price is already established and a tariff redundancy exists, the tax exemption for export may not be effective. This can operate only when the tariff redundancy is removed and an increase in the tax rate is to come. This may force the domestic producers to look for a marginal increase in their profit by reducing the tax liabilities through expansion of their exports. Still, one should consider that the tax incentive cannot make an industry competitive in the international market, if its cost of production is higher than that prevailing in the world market. As far as the effect of tax incentives on

exports in Iran is concerned, one may say that none of the above conditions exists; tariff protection is redundant and the market is highly imperfect, dominated by monopolies and oligopolies. This means that corporations will largely concentrate their activities on the domestic market and the tax incentives for exports will be less effective.

Protection Policy

The present protection policy with some modification came to exist in 1958 and particularly has been used since 1961-62. It is a complex system that consists of a) tariff protection, b) quantitative measure, c) compulsory deposit and e) registration fees (for detailed examination of the tariff system see chapter 6).

a)- Tariff protection consists of two parts, custom duties and commercial benefit tax. The former which is a duty imposed on imports must be ratified by the Majles (House of Commons). The rates levied on imports have remained more or less unchanged in order to prevent fluctuation in the government revenue from custom duties. Nevertheless, whenever the tariff protection for the whole of the economy is to be raised, custom duties have been pushed up. Therefore, it has little effect on the relative change in the importance of different industries. The latter is an indirect tax levied on imports similar to custom duties. Rates of duties are solely determined by the government administration and therefore enjoy a great flexibility and effectiveness relative to custom duties (for detail of change in rates see chapter 6).

b) Quantitative Restrictions- Importation of certain commodities have been prohibited because the domestic production of such goods is sufficient to meet the domestic demand. In 1971, this category accounted for 20 percent of total imports³⁶. Also, importation of certain commodities is subject to special licenses. This involves goods which are regarded as important for general health, security and agricultural growth.

c)- Compulsory Deposit- Importers are obliged to deposit a certain proportion of the value of their imports with the central bank. Different rates have been used to discriminate against the importation of goods according to the government protection policy ranging between zero percent for capital goods to 100 percent for luxury consumer goods. Since, in this way, substantial capital can be tied up for a period of three months to one year, it can be considered as a supplementary tool for the promotion of certain industries, however these effects are marginal.

d)- Registration fees- The registration fee is a small percentage of the value of imports which importers are obliged to pay at the time when import orders are placed. The rates charged on imports were between one to 5.5 percent until it was lifted in 1974 (see chapter 6). Since it has been used more or less indiscriminately for the whole range of commodities, it has little effect on the structure of the manufacturing sector. Nevertheless, it has provided general protection for the whole of the domestic market.

The above showed the structure of the protection policy. How effectively it has been used and what has been its impact on the structure of the manufacturing sector is hard to say in the absence of the necessary data on the nominal and effective tariff and a thorough examination of such effects. Here, we only try to show the pattern very briefly, based on the scattered data and some other studies.

The nominal protection for the economy as a whole can be seen from table (4-38) which shows the percentage of the custom revenue relative to imports. While the nominal protection ratio has remained stable at some 20 percent during the 1960's, it rose to 24 percent during 1970-73 and then suddenly declined to around 14 percent by 1976. The decline in the rate of protection in the last years has been a consequence of the government's liberal policy in order to reduce inflationary pressures (see chapters 6 and 7). This has been largely due to the reduction of the rate of commer-

Nominal Tariff Protection For the
Whole Economy During 1964-76

Table (4-38)

	1964	1967	1970	1973	1974	1975	1976
Custom Revenue (1) Billion Rials	11.2	18.2	26.9	60.7	63.5	92.6	121.6
Value of Imports (2) Billion Rials	56.8	90.5	128.3	253.2	448.1	800.8	860.4
Ratio 1/2 Percentage	19.7	20.1	20.9	24.0	14.2	11.6	14.1

Source: BMI, Annual Report, 1965-76; Plan and Budget Organization, Statistical Year Book 1972-76.

cial benefit tax for some necessities and lifting the registration fees. However, the above picture is incomplete and underestimates the real protection enjoyed by the manufacturing sector during this period for the following reasons:

First, it covers the economy as a whole therefore it includes those goods which are not classified as manufactured products.

Second, it does not take into account the relative importance of protection based on the domestic value added and output.

Third, it does not show the importance of the different industries.

Fourth, since a large range of domestic production is protected by quantitative restrictions, the simple nominal rate of tariff protection does not show the importance of the quantitative restrictions.

Although we will try to complete the picture by dropping some of the above restrictions, we will not carry on our analysis beyond the effect of average and nominal rates of protection. Nevertheless, an attempt will be made to show the effect of the quantitative measures. When the average nominal tariff for the manufacturing sector alone is considered, contrary to the economy as a whole, it shows a four fold increase during the 1960's. This gave the manufacturing sector a nominal rate of tariff protection of around 120.7 percent in 1970 (table 4-39). which is around 600 percent higher than that of the economy as a whole. More importantly, a comparison between 1965 and 1970 shows that the aggregate protection for the manufacturing sector rose at a lower rate during 1965-70 than in the first half of the 1960's. One reason for this lower increase in the rate of protection is that the major consumer industries, which accounted for a large share of domestic products, by 1965 had received a high enough rate of protection to compete against foreign suppliers. Also, they have received protection through quantitative restriction which is not reflected in the above nominal ratio.

Average Nominal Protection By
Industries in 1965 and 1970

Table (4-39)

Type of Industry	Average Nominal Protection		Percentage Share of Protection	
	1965	1970	1965	1970
Consumer Goods	131.4	138.8	82.6	71.1
Food	121.0	65.0		
Beverages	351.8	485.0		
Tobacco	239.0	264.0		
Textiles	90.1	94.0		
Apparel	144.1	236.0		
Wood Products	126.5	195.0		
Leather	179.3	253.0		
Intermediate Goods	59.0	97.9	11.8	21.6
Paper & Printing	11.7	56.0		
Rubber	55.4	66.0		
Chemicals	58.1	116.0		
Basic Metals	18.7	87.0		
Metal Products	42.6	55.0		
Non-metallic & Minerals	81.8	137.0		
Capital Goods	55.1	84.4	4.4	7.2
Machinery	30.4	59.0		
Transport Equipment	70.7	104.0		
Other Industries	69.8	12.0	1.2	0.1
Total	108.3	120.7	100.0	100.0

Source: United Nations, ECAFE, Effective Protection and inter-regional trade, Vol., II, 1972; Ministry of Economy, Iranian Industrial Statistics 1970-71; General Import-Export Regulations 1970-71; Ministry of Finance, Foreign Trade Statistics of Iran, 1960-61 and 1969-70; Plan Organization, Statistical Year Book 1967.

Along with the rising of the average nominal protection, an important change can be seen in the structure of protection. As table (4-39) shows, while the average nominal tariff protection on the consumer goods group remained more or less unchanged during 1965-70, it rose rapidly in the case of intermediate and capital goods industries. But the rate of protection is still higher for consumer goods than for other groups. Taking into account that most of the consumer goods industries started in the 1950's or early 1960's, it may be possible to argue that, as we said above, by the mid 1960's they had reached a degree of efficiency which could compete against foreign producers under the existing tariff shelter. When we look at the group of consumer goods, it appears that the average nominal tariff for two of the most important traditional industries, food and textiles, either were reduced or remained more or less unchanged, while for other manufacturing industries in this group, the average nominal tariff rates rose. Although the rising of efficiency may have been an important factor, it must be recognised that the consumer goods industries, which are able to produce sufficiently to meet the domestic demand, are also protected through quantitative restrictions.

However, the average rate of tariff for each manufacturing group hides a considerable variation which exists among individual tariff rates imposed on the different products within the same manufacturing group. For example, in chemical industries, the tariff rate varied from zero on DDT and fertiliser to 300 percent on cosmetics and related products. Similarly, in the transport equipment sector there is a range from zero for boats to 300 percent on luxury cars³⁷. These examples illustrate the general pattern of tariff rates, typically very low on essential consumer and capital goods, and very high on luxury and non-essential items. Another shortcoming of the average nominal tariff is that it includes those commodities which are not produced domestically but enter into international trade. Although

it can be argued that this may distort the pattern of protection, it should be understood that it still can encourage investment in those field which have been protected and produce the same effects on the reallocation of resources.

The above shows only one side of the protection policy. On the other side, we can see the change in the pattern and importance of the quantitative restriction. Between 25 to 35 percent of imports were sheltered through the quantitative restrictions. Taking into account that the share of these groups in the total domestic value added is high, it indicates the importance of the quantitative restriction in the structure of protection; it is estimated that around $3/4$ of manufacturing products were protected through quantitative restriction in 1970. Depending on the sufficiency of products to meet the domestic demand, the degree of protection granted to different groups of industries and to different industries in each group is different. The non-durable consumer goods and transport equipment received the heaviest protection followed by intermediate goods. For the consumer goods group, the rate varies between 100 percent for beverages to 13.5 percent for leather. In the intermediate group, rubber with 100 percent protection was at the top of the group and paper with zero was in the bottom of the group. In the capital goods industries, transport received 94.3 percent protection through the quantitative restriction while machinery enjoyed 68.1 percent ³⁸.

The above pattern of quantitative restrictions indicates that those industries which have reached the stage of mass production and produce sufficiently to meet the domestic demand are entirely protected through the quantitative restrictions. One consequence of such a highly protected economy is the creation of a monopoly in certain industries which means higher prices to consumers and misallocation of resources. However, if there exists keen competition within the domestic market, it will, to some extent, correct the created distortion. As we have explained, the government policy with regard to credit and direct control have reinforced the

process of creation of a monopolistic condition. If such a situation exists, it is hard to believe that domestic competition can be so effective.

However, since 1973, the Iranian economy has undergone a substantial change with regard to protection policy. Although the change have been brought about to combat inflationary pressures, they have affected the degree of protection of the manufacturing sector. In the absence of data for 1970 onward, we may rely on the estimation for the economy as a whole which shows a sharp decline in the protection rates. The tariff reduction and the loosening of the quantitative restriction have reduced the protection of the consumer goods industries. Also, the registration fees have been lifted which can indiscriminately affect the manufacturing sector as a whole. Therefore, it is likely that the tariff redundancy in some manufacturing products should have been diminished by 1976 (also see chapter 6).

Conclusion

With regard to the development of public utilities, the distribution effects of government expenditure have been undermined. Only a small fraction of the society has benefited from government expenditure. The government policy, in this respect also, has encouraged wasteful use of the services in the more optional and luxury uses and has undermined the optimal utilization of scarce resources. The government policy with regard to the public utilities has been affected by the government agricultural policy and the choice of channel of finance i.e. taxation. The latter has been affected by the source of government revenue. Since a large share of government revenue is provided through oil money, it has given the state a degree of independence and the taxpayer opinion about the expenditure may have been less reflected in the choice of finance.

Similarly, the government's policy with regard to the construction sector has been affected by the political structure of the society which has allowed the expansion of the government defence activity. Due to the importance of political determinants, the revenue constraint has not affected construction in the public sector but rather has discriminated against productive investment in other sectors. Also, because of the nature of construction in defence, the investment in public construction has been the most unproductive and undesirable. However, although, in the short-run, it has created a flow of income to low income-groups and has raised the employment level, in the long-run, the pattern of construction in the public sector may indicate nothing but waste of financial and human resources. In short, the political determinants and short-run considerations have overshadowed the long-run economic rationality.

The government intervention in the manufacturing sector has also reflected the irrationality of the system. While both the GDI and GDIA have

concentrated on the development of capital intensive industries, the small scale industries have been silently ignored. With the emphasis on the capital intensive industries, the government has supported the output maximization policy in the existing dualistic condition. In this way, employment would follow the pattern of production rather than being considered as a specific policy.

Although the manufacturing sector could increase its share in the total employed population during the mid 1960s (that is the boom of the private large manufacturing), its share has remained stable since the late 1960's. However, the large share of small scale industries in the employment of the manufacturing sector has been the main reason for the large share of employment of the manufacturing sector in the total employed population.

Despite enormous government assistance to the private capital intensive industries, the limited absorbent capacity of the Iranian small market has decreased the rate of growth of output in this sector in the late 1960s. The lower growth of output in the large scale industries, on the one hand, and the diversity of production in the small scale industries which also enjoy a high income elasticity of demand, on the other hand, have been the major causes for the survival of the small scale establishment. However, the further improvement in the share of the small scale in the total value added would be dependent on the income elasticity and the degree of substitutibility.

The share of the public sector in the total value added in manufacturing was low in the late 1960s due to the long gestation period of the public capital intensive projects and the accompanying under-utilization of capacity at the beginning of production. However, since 1972, with the better utilization of capacity, the share of the government in the total value added has increased. Since the new public manufacturings are in the

capital and intermediate industries, their growth is subject to demand from the consumer industries which are dominated by the private sector. With the decreasing tendency in the growth of output of the large scale establishments, public manufacturing would reach its limitation sooner or later, unless the market for consumer goods can be enlarged. Still, the rural market can be utilized if the effective demand can be created through a better distribution of income either by an improvement in the trade balance between rural and urban areas or by higher government assistance to the rural sector.

However, the pattern of investment does not show any tendency toward the expansion of the domestic market, although it does show a clear change in the pattern of industries. The government has switched toward military industries, the expansion of which will be dependent on the expansion of the army and the defence budget. This clearly shows the political importance of the army since the late 1960s which has influenced the pattern of investment in the manufacturing sector. This irrationality of the government investment with regard to the development of capital intensive industries and the misallocation of resources has been accentuated by the government protection and credit policy.

Some degree of capital intensity has been the inevitable consequence of the development of the Iranian manufacturing sector toward producing intermediate and capital goods. In this respect, the government protection policy which has been tailored for such changes has created the necessary protection for the establishment of modern industries in the intermediate and capital goods groups.

Government credit policy has also reinforced the pattern of industrial development toward capital intensity. First, the share of urban small-scale and rural manufacturing in the total government credit has remained insign-

nificant. Consequently, these industrial establishments have to resort to the unorganized money markets which by their nature require a substantially higher rate of interest than that prevailing in the organized money market. Second, the industrial banks have entirely concentrated on capital intensive projects. By using the IRR method of evaluation, credit has been made to the most profitable branches of industry wherever protection policy has allowed it to do so. The government licensing system has been ineffective and distorting. The bureaucratic nature of the system has limited the privilege of such a system to a handful of industrialists. The criteria used for the evaluation has been too simple to deal with the complex objectives of the licensing system and has practically ended up as a book of selected projects which have usually been suggested by the industrial banks. By their nature, they have been more concerned about the profitability of projects rather than the social cost-benefit consideration. In this way, the licensing system has created and protected the monopoly of some industries for prominent industrialists. They have benefited from the cheap loans, changes in the protection policy and so on. These factors, too, have accelerated the process of capital intensity in the industrial sector. In particular, the small-scale and large labour intensive industries have been undermined. Similarly, the tax incentive has been in favour of large industrial establishments and has reinforced capital intensity.

Appendix A

The following table shows the share of different economic factors in the total value added in manufacturing and mines by the sectors. To calculate the share of the public sector in the manufacturing sector, mathematical relations go as follow:

$$W_n = W_p + W_g$$

$$W_n = V_p (w_p) + V_g (w_g)$$

$$V_n = V_p + V_g$$

$$W_n = (V_n - V_g) w_p + V_g w_g$$

$$W_n = V_n w_n$$

$$V_n w_n = (V_n - V_g) w_p + V_g w_g$$

$$V_g = (w_n - w_p / w_g - w_p) V_n$$

While W_n is share of wage in total value added in absolute terms; W_p is the share of wage in the value added of the private sector; W_g is the share of wage in the value added of the public sector; w_n , w_p and w_g show the respective coefficients for the above. V_n , V_p and V_g Show the value added in the country, private sector and public sector respectively.

Distribution of Value Added in Manufacturing and Mines by Productive Factors

Table (4-40)

	1972			1973			Percentage 1974		
	Pri- Vate	Pub- lic	Total	Pri- vate	Pub- lic	Total	Pri- vate	Pub- lic	Total
Wage	28.2	61.0	30.3	22.3	59.5	25.0	28.5	49.7	30.4
Rent	20.4	2.4	19.3	20.7	0.9	19.3	24.4	0.9	22.3
Interest	3.3	3.9	3.3	3.4	5.0	3.5	3.7	5.9	3.9
Deprecia- tion	16.9	30.3	17.7	14.6	27.6	15.5	14.1	23.1	14.9
Profit	31.2	2.4	29.4	39.0	7.0	36.7	29.3	20.3	28.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: BMI, Annual Report, 1353 (1974), P. 24.

Note

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Chapter Five

5 Development of Service Sector

Introduction

Since 1960, the service sector in Iran has accounted for an important share of GDP. Its share has increased from 41 percent in 1959 to 51 percent in 1975. Despite the very high share of service sector in GDP, its share in total employed labour force has increased only by 2.5 percent during 1959-76. This pattern of development poses two questions. Firstly, why should the share of the service sector in the early stage of development be so high and secondly what are the effects of this relatively large sector on the total productivity, employment and consumption¹.

In the earlier chapters where we dealt with the sectoral changes in an economy, the relative rise and decline of the manufacturing and agricultural sectors was explained by the difference in the labour productivity and income elasticity of demand. In contrast to the development of the manufacturing sector, the development of the service sector cannot be attributed to the difference in the productivity and income elasticity for the following reasons:

a- Theoretically speaking, there is a significant problem in explaining how the development of service sector can affect the total productivity. The problem arises from the heterogeneity of components of the service sector. On the one hand, some services may indirectly increase the aggregate productivity. For instance, transport, trade and banking as well as education and health services may contribute to the growth of labour productivity while defence and domestic services may not only make no contribution to the growth of labour productivity, but may also cause waste of natural and human resources. The first group which develop along with the capitalist path of development, in one way or another, will help the expansion of the

productive sector of both agriculture and industry. The expansion of transport may reduce the cost of production and smooth away difficulties in capturing of new markets thereby make the mass production, with its economic of scale, possible. Similarly, the expansion of trade may facilitate the expansion of a market for industrial products. The expansion of banking services may reduce the cost of capital and accelerate the process of the accumulation of capital thereby contributing in the development of the industrial sector. Indirectly, also, education, through training of manpower, and health, by improving physical conditions of human resources, may raise the labour productivity. The total effect of the service sector on labour productivity depends on the share of different services and their merits in a certain stage of development. Over-expansion of services, in particular, defence may do more harm than good to the society from the productivity point of view (see the relevant sections in this chapter).

b- In practice, one cannot give any meaning to the "productivity" in this sector. For example, the high relative productivity of the service sector in Iran (table 3-3) reveals only higher wages and profitability and nothing can be said about the relative sectoral productivity in physical terms,

c- Although most of the components of the service sector produce non-traded goods and therefore enjoy a natural protection against foreign competitors, not all indicate a strong income-elasticity of demand and, thus, the development of the service sector as a whole may not show a clear rising trend in different stages of development due to the heterogeneous nature of its components. Not all services develop parallel to each other. In certain stages of development, some services develop faster than others with stronger income-demand relationship, some develop with no clear relation to the rising of income and stage of development and some others may be replaced by new ones. If one wants to classify different services to more homogenous groups and with regard to income-elasticity of demand, there

will be three main groups, the old services, complementary services and new services²:

1- Old Services- Old services are related to the remaining feudalistic structure of the society which may remain for a long period until they completely disappear in the structure of new society. Domestic services, in particular servants to private families, shoeshiners, petty traders, stable-keepers and so on are some examples. These are highly income-demand inelastic, demand for which will not increase along with the rising of income per capita; and along with the expansion of the industrial sector, they will be replaced by new services such as restaurant services, garages, urban transports and so on³. The survival of the old services, despite its declining trend, can largely be attributed, on the one hand, to demand for the traditional services due to the very low wage paid for such services⁴ and on the other hand, to the surplus of labour, very low income and urban poverty that create the conditions under which some workers are willing to accept the very low wage in order to supplement the family income, perhaps during a period of temporary unemployment⁵. However, by the expansion of the industrial sector and the appearance of new services which will push up the wage-level, the traditional services will gradually disappear.

2- Complementary Services- This category consists of trade, transports and banking which expand along with industrialization and as complementary to the development of the industrial sector. However, even within this group, the growth rate may be different for different components in different stages of development. For instance, trade and transport may grow faster in the early years of industrialization when the market for industrial products is rapidly expanding while the banking may appear to have a higher growth rate in the later stages of development when the degree of monetization and capitalization has substantially risen.

3- New Services- This group may consist of education, medical services and entertainments(including holiday resorts, hotels, restaurants, cinemas and so on) which have a stronger relationship with the rising of income. Here, too, the determinants and the degree of significance of the income-demand relationship are different for different components of the new services. It may be said that some services , which are directly received by individuals, such as leisure services may be highly income-demand elastic, demand for which increases once the 'basic' need for food and manufacturing products are satisfied⁶, some others like education and health are affected not only by the rising of income, but more importantly, by the socio-political structure of the society as well as the international 'demonstration effect'⁷. Also, other government services in particular defence may have no direct connection with the rising of incomes and have largely affected by the political structure of the society and international ideological conflicts (see chapters one and two for detailed discussion about the determinants of government expenditure). The latter three services (education, health and defence) in particular call for a higher share of state expenditure in developing countries today than that of developed countries when they were in a similar stage of development. In the case of Iran, as appears in table (5-1) the public services shows the highest rate of growth during the 1960's. Its share in the total services at current prices increased from 27.8 percent in 1959 to approximately 40 percent in 1971. These could be the reasons why the service sector in developing countries accounts for a large share of national income which proportionally is not far from those in developed countries with higher per capita income (here we have been brief about the determinant of different government services since we have discussed them in chapters one and two).

Although the determinants of the share of the service sector in

Distribution of Value Added in the Service
Sector By Public and Private Sectors
(at Current Prices)

Table (5-1)

Percentage

Sectors	1959	1965	1971	1974
Public Sector	27.8	35.4	40.0	36.3
Private Sector	71.7	64.3	59.4	63.7
Others Not Classified	0.5	0.3	0.6	-
Total	100.0	100.0	100.0	100.0

Source: BMI, Annual Report, 1974; National Income of Iran 1959-71.

Distribution of Value Added in the Service
Sector By Major Economic Sectors (at
Constant Prices)

Table (3-2)

Percentage

Economic Sectors	1959	1965	1971	1975
Economic Services	51.8	47.2	45.6	45.1
Transport	(25.5)	(21.0)	(15.5)	(16.8)
Banking	(5.2)	(6.4)	(11.7)	(14.4)
Home Trade	(21.1)	(19.8)	(18.4)	(14.4)
Other Services	48.2	52.8	54.4	53.9
Home Rent	(14.5)	(15.0)	(12.2)	(20.4)
Public Services	(21.6)	(26.4)	(30.2)	(23.6)
Private Services	(12.1)	(11.4)	(12.0)	(9.9)
Total	100.0	100.0	100.0	100.0

Source: BMI, Annual Report, 1975; National Income of Iran 1959-71.

the national income may or may not be economical, its effects on the economy is subject to the same economic criteria as any time when the maximum utilization of human and natural resources are considered. For example, while the determinants of defence expenditure and expansion of military forces are political, its effect on the financial resources and labour force may reduce the possibility of the expansion of the productive sectors, whilst the effects of educational services may be recognized as useful and desirable to raise the labour productivity. Thus, to illustrate the economic effects of different services, a careful examination of these services at a disaggregated level is necessary. Since, here, we are concerned only with the public sector, it is best to avoid discussion on the private sector. Services are divided into public economic and social aspects.

5-1 Economic Services

Those services which have been recognized essential to the development of capitalism can be brought under this category. In other words, those services which are created or expanded along with industrialization. Transport, communication, banking, insurance and trade come under the economic services. As it appears in table (5-2), the growth of economic services was lower than the other component and consequently its share in the total services declined from 51.8 percent in 1959 to 46.1 percent in 1975. However, a structural change can be seen both in the sectoral composition of economic services and also in regard to the responsible bodies. As far as the former is concerned, the relative increase of the banking contribution and falling of other economic services is plausible; the latter shows a higher rate of growth for the government's economic services. Here we are concerned with the government services; and sectoral changes will be explained by considering the public sector's contribution.

The government's share in the total economic services has increased

from 11.2 percent in 1959 to 20.2 percent in 1971 (at current prices). This higher rate of growth has been accompanied by the relative change in the composition of the economic services. It shows a declining share in transportation and increasing share in banking, the only two government economic services (since we have already discussed the role of public banking in the industrial and agricultural sectors, we will confine our analysis to the transport sector. (table 5-3).

5-1-1 Transportation

Pattern of Development

Here, we are not concerned with the economics of transportation and its related issues such as pricing, cost-benefit analysis and so on. We will try to throw light on the problem of transportation services and its development in growing economy where the opportunity for investment is high and the lack of investment is serious.

The growth rate of transportation has been low both in the public and private sectors. Its share in total services has declined from 25 percent in 1959 to 16.8 percent in 1975 (at constant prices). This slower rate of growth can be explained either by a slower rate of growth of demand for transport relative to other services or by the possibility that supply could not be adjusted to the demand due to the peculiarity of transport services.

As far as demand is concerned, the volume of passengers is determined by the location of individuals' activities, and the volume of goods transported may be determined by the location of industrial, agricultural and commercial centres⁸. In Iran, due to the economic structure of the society the demand for transport is relatively low. A large percentage of the population are involved in agricultural activities, their farms are their homes and their demand is not for regular commuter transport. Also, the subsistence agriculture may have reduced the demand for transported commodities.

Distribution of Value Added in Economic Services
By Major Sectors (at Current Prices)

Table (5-3)

		Percentage								
Sectors		1959			1965			1971		
		Public	Private	Total	Public	Private	Total	Public	Private	Total
Transport	%	14.2	86.8	100.0	18.9	81.1	100.0	24.2	75.8	100.0
Banking	%	52.9	47.1	100.0	52.7	47.3	100.0	52.8	47.2	100.0
Total Economic Services	%	11.9	88.1	100.0	15.3	84.7	100.0	20.2	79.8	100.0

Source: BMI, National Income of Iran 1959-71.

Thus, the demand for transport is limited to the growing towns and particularly large cities. Realizing the economic structure of the society that is made up of a subsistence agricultural sector and a small modern industrial sector which is highly market-orientated, the volume of demand for transport is reflected in the volume of trade. In turn, the growth rate of trade has been slow due to the following factors.

In Iran, trade has traditionally been important since the emergence of mercantile capitalism. The certainty of the traditional trade activities and high rate of return of capital would have been the main reasons for sluggish movement of capital from trade to industry. But a relative shift from home trade to international trade can be expected (port services are particularly related to this shift), especially in a wealthy country like Iran. Thus, the large base of home trade before industrialization is the reason why trade activities have not expanded as quickly as the industrial sector. The share of home trade has declined from 21 percent in 1959 to 14.4 percent in 1975 (at constant prices). This decreasing share of trade has imposed a limitation on the demand for transport services. However, while the demand for transport can be an incentive to the supply, an easy supply that is faster and cheaper can create its own demand.

In the economics of transport, supply is highly important. In the long-run, the problem of supply usually leaves demand unsatisfied and this is reflected in queuing, rationing and regulations⁹. Ultimately, this is the problem of supply which explains the pattern of development and determines the public investment in transport services.

The major problem of supply arises from the nature of the transport infrastructure which is extremely costly, exceptionally long-lasting, severely indivisible and has few alternative uses¹⁰. While all these characteristics are responsible for the slow growth of supply when the demand sharply increases, they also explain the huge excess capacity when a new

road, a rail way, an airport or a port is built. In a growing economy, once a certain infra-structural investment in transport is achieved, the basic transport services can be introduced. So considering that a large percentage of the transport infra-structure in Iran was constructed during the Second Development Plan (the share of transport in the total plan disbursement has declined from 39.8 percent during the Second to 17.4 percent during the Fifth Plan, see table 5-4), it is not surprising that transport services account for 25 percent of total services in 1959 (table 5-2). However, further expansion of such services would be limited to the introduction of better services with lower costs or opening new markets which are largely dependent on the demand for transport.

Up to a certain level the expansion of trade and thereby the demand for transport would result in the full utilization of existing capacity in the transport infra-structure. However, as it has been explained above, the volume of trade has not increased as fast as the other services. This has been so, because most of the cities' markets have been captured for a long period, long enough to be recognized as established markets and there is no need to expand transport services as fast as is required for opening a new market. Thus, the further growth of this service depends on the capturing of rural markets which are both small and costly. It is small due to the low level of income and the low degree of monetization. These have reduced the possibility of the expansion of a market for industrial products which is expected to be the main factor for the expansion of trade activities. It is costly, because the infra-structure in rural roads construction has been low enough to raise the cost of transportation.

Public Transportation

Although the growth rate in the transport has been lower than the other services, public transport has enjoyed a higher rate of growth than that of the private sector. This has been largely due to the type of services

Plan's Disbursement For Transportation And Communication

Table (5-4)

Billion Rials

Plan Disbursement	Second Plan	Third Plan	Fourth Plan	Fifth Plan
Transport & Communication	29.9	53.8	71.4	495.0
%	(39.8)	(26.3)	(14.1)	(17.4)
Total Plan	75.2	204.6	506.8	2847.0

Source : Plan Organization, Second Plan, 1963 ; Plan and Budget Organization , Third Plan, 1967 and Fifth Plan, 1973 ; BMI, Annual Report, 1972.

in which the public sector is involved. The high infra-structural investment in rail way, airport and port construction has given monopoly rights to the public sector. All these services are income elastic, demand for which rises with an increase in income. This also makes it more competitive (with the exception of shipping) with road transport in which a number of private agencies are involved. However, a large country with a scattered population like Iran increase the cost of rail way and air transport. This has made the expansion of such services limited to the major large cities and particularly transport connections between the major ports and large consumption markets and industrial centres. Despite the faster growth rate, public transport has remained as a small fraction of the total transport services, its share hardly reached 24 percent by 1971 (table 5-3).

As it has been explained, the further expansion of public transport with regard to rail ways and ports is facing the serious problem of lack of infra-structure. The only 'one rail-way-track' of the state rail way transport has increased the time of travel and therefore the cost of rail way transport. Despite the lack of a minimum feasible infra-structure in rail ways, the monopoly position of the government has made the operation of this services possible, through rationing and the price system. The further expansion of the existing main rail way tracks could reduce the time of journeys and thus make it more competitive with road transport. However, the best example of the case of lack of infra-structure is the ports which have been handling around 90 percent of the total imports and exports in 1975¹¹.

The lack of infra-structure in the ports has increased the average 'service time' for all ports from 79 hours in 1966 to 205 hours in 1975. The inflexibility of supply can clearly be seen from the sharp increase in the 'service time'. The increase in the 'service time' shows largely the deficiency of port management. This is particularly shown in table (5-5) for 1969 to 1971. Although the percentage of capacity in use is not more than

Commodities Loaded and Unloaded at Ports, Service and Queuing Time
And Percentage Of Used Capacity ¹

Table (5-5)

Year	Commodities Unloaded (1000 Tons)	Commodities Loaded (1000 Tons)	Total	Total Ports Capacity	Percentage Capacity Used	Average Service Time (Hours)	Average Queuing Time (Hours)	Average of Service and Queuing Time (Hours)
1966	2003	596	2599	-	-	79.0	-	-
1969	2362	707	3069	5200	59.0	102.0	20.8	122.8
1970	2500	1079	3579	5200	68.8	101.0	32.7	133.7
1971	4107	974	5081	5200	79.7	141.0	77.3	218.3
1972	4145	1187	5332	5200	102.5	138.0	70.6	208.6
1973	5517	1320	6837	5200	131.5	157.0	57.0	214.0
1974	8529	1249	9778	5200	164.0	159.0	108.6	267.6
1975	10964	968	11932	5200	210.0	205.0	592.2	797.2
Khormshahr						239.0	1388.0	1627.0

Note : 1- Average service time for commercial vessels is 110 hours and 36 hours for oil tankers

Source : Bank Markazi Iran (BMI), 1975 ; Port and Shipping Organization, 1974.

59 percent, still an average 'queuing time' of 20.8 hours is noticeable. This may have been due to the unequal distribution of shipping between different ports; while one port was under utilized another was over utilized. The 1971 case shows that the ports have been in full utilization, but the high 'service time' (141 hours compared with 110 hours accepted as the normal time by the Port Organization) indicates that the ports' management could not use the current capital (loading and unloading facilities) to the maximum capacity. In this year, also, the increasing average 'queuing time' is alarming. The 'queuing time' is an indicator of the disability of management to offer the service needed, either due to the lack of infra-structure or because of mismanagement of current capital. While the latter is the case for before 1971, the former is certainly the case from 1972 onwards. Due to the over utilization of port capacity, the average 'service time' has increased to 205 hours in 1975 which is nearly twice as much as the normal time. Although the ports have been over utilized, the average 'queuing time' has shot up to 592.2 hours in 1975 compared with 20.8 hours in 1969. When a particular port like Khormshahr is considered the average ' queuing time' of 1388 hours far higher even than that of the total.

This state of affairs shows that the serious lack of infra-structure in ports has been felt since 1971. But, the problem is whether or not this increasing trend of importing through ports is a temporary pressure due to the sharp increase in the oil revenue during 1973-74. The 1974 volume of imports may have been exceptionally high, but the permanent trend of approximately 22 percent annual growth of imports and exports handled through ports clearly shows that the existing capacity of ports had been exhausted before 1972. The sharp increase of oil revenue has only accentuated the problem. However, this is either a result of short-sighted planning or the high social benefit of other projects which has pushed out investment in port projects. What is certain is that the investment in transport infra-structure is very

costly and it is not easy, even through different mathematical models, to maximize the social benefits of the chosen social and economic projects, due to the lack of commonly accepted criteria by the majority of economists. But, if it is recognized that the determinants of defence expenditure in a developing country are political (see pp 349) as long as any project is rejected in order to finance the military expenditure, this can be an economic sacrifice which a country has to pay for its political existence under the dominant political structure. However, to quantify the economic sacrifice in this case, it should be considered that during 1973-75 about 1.2 Billion dollars yearly has been paid by the government as the 'surcharge' for the delay to shipping companies.¹².

5-2 Social Services

The share of economic services in the total government services has not been more than 22 percent. While this share remained stable during the 1960's, it declined to 17 percent in 1974. This was largely due to the rapid growth of public social services which accounts for 83 percent of the total public services.

However, the disaggregated data on the value added for the public services in Iran consists of a contribution from different ministries and municipalities. Since the data is not useful for the analysis of the effects of government expenditure, we will discuss the effects according to the major services provided by the government i.e. education, health and defence. As we have seen in chapter two, the government has emphasised the expansion of defence while education and health have been undermined in the allocation of government expenditure. Despite the sharp increase in oil revenue in 1973-74, the share of the latter two, relative to GDP, has remained more or less unchanged which indicates that the relaxation of revenue constraints has not affected the relative importance of these services. Nevertheless, they have

shown rapid expansion in absolute terms which one may expect to see some changes with respect to sufficiency of such services and their effects on the economy.

5-2-1 Education

Introduction

The government expenditure on education services has remained more or less unchanged during 1960-76, declining from 3.9 percent of the GDP in 1966 to 2.9 percent in 1974 and then rising to 3.9 percent in 1976 (table 5-6). Although the relative importance of educational expenditure has been undermined, the growth of government expenditure in absolute terms has been rapid and far above that of the population (annual rate of growth of 14 percent at constant prices in comparison with 2.4 percent growth rate of population). With the rapid expansion of government expenditure, the government has become the main supplier of educational services. Therefore, its policy with regard to the supply of education and to the distribution and effectiveness of educational services are the main determinants of the aggregate performance of such services.

The 1976 sampling census shows that about 56.7 percent of the population is still illiterate. When only the rural areas are considering the percentage of illiteracy is as high as 74.3 percent, the corresponding percentage for urban areas is about 36.0 percent. However, the high percentage of illiteracy is noticeable, but, the situation in 1976 is far better than it was in 1966. Although the government's campaign against illiteracy shows some success both in the rural and urban areas (table 5-7), the increase in the number of illiterates in absolute terms indicates that illiteracy is not limited to the adults but that it also affects children between the ages 6 to 14 years. One implication of the above pattern is that government expenditure in education has not been sufficient to provide an effective and

Budgetary Allocation For Education and Health ¹

At Current Prices

Table (5-6)

								Billion Rials
	1966	1969	1972	1973	1974	1975	1976	Annual Growth Rate At Constant Prices ²
Education	18.6	22.0	39.7	53.0	90.3	125.1	174.7	14 %
%	(3.9)	(3.2)	(3.3)	(3.0)	(2.9)	(3.6)	(3.9)	
Health	7.9	9.9	13.6	18.2	39.7	51.2	62.3	12 %
%	(1.7)	(1.4)	(1.1)	(1.0)	(1.3)	(1.5)	(1.4)	
G.D.P.	473.3	690.7	1190.2	1783.6	3070.8	3477.4	4579.6	

Note: 1- Figures in () show the ratio relative to GDP (Percentage).

2- The growth rate at constant prices has been calculated according to data on government expenditure at the aggregate level.

Source: Budget Acts 1970-76; and United Nations, Statistical Year Book 1973.

School Enrolment By Level of Education and Sectors

Table (5-7)

(,000) Persons

Level of Education	1966			1972			1976		
	Urban	Rural	Total	Urban	Rural	Total	Urban	Rural	Total
Without School Certificate	304 % (4.0)	288 (2.6)	592 (3.1)	431 (4.1)	284 (2.0)	715 (3.0)	-	-	-
Elementary, (1 to 6) Grade	2477 % (32.6)	1291 (11.5)	3768 (20.0)	3585 (34.3)	2214 (16.7)	5799 (24.5)			
Secondary, (7 to 12) Grade	911 % (12.0)	103 (0.9)	1015 (5.4)	1863 (17.8)	325 (2.4)	2188 (9.2)			
University 1 + Years	106 % (1.4)	3 *	109 (0.5)	195 (1.8)	5 *	201 (0.9)			
Certificate Not Reported	35	14	49	16	9	25			
Total Literate	3833 % (50.1)	1700 (15.2)	5533 (29.4)	6091 (48.4)	2837 (21.4)	8928 (37.7)	(64.0)	(25.7)	(43.3)
Illiterates	3770 % (49.9)	9540 (84.8)	13310 (70.6)	4347 (41.6)	10416 (78.6)	14763 (62.3)	(36.0)	(74.3)	(56.7)
Total Population Over 7 Years	7603 % (100.0)	11240 (100.0)	18843 (100.0)	10438 (100.0)	13253 (100.0)	23691 (100.0)	(100.0)	(100.0)	(100.0)

Source: Plan and Budget Organization, Population Census 1966; Manpower Sampling 1972; BMI, Annual Report 1976.

necessary education for the whole of the country. Distribution of expenditure with regard to education falls short of equality. The questions are whether or not lack of supply has been the only factor responsible for the shortcomings in the education service and whether or not the lack of demand has left education supplied by the government unutilized. More importantly, what have the effects of supply and demand of education on the labour productivity and the structure of employment been ? These effects are not only related to the supply and demand conditions, but also, depend on the quality of education with regard to its appropriateness to the economic structure of the society. In order to evaluate these effects, we have divided this section into three sub-sections:

- 1- Supply of Education- a) Elementary Schooling, b)- Secondary Schooling, c) Technical and Vocational Training and d)- Higher Education.
- 2- Demand for Education (Role of Family)
- 3- Effects of Education- a)-Productivity, b)-Structure of Employment.

5-2-1-1 Supply of Education

Primary Education

Both, the private and public sectors, have been active in the supply of primary education. The share of the private elementary schooling is not more than 8.9 percent of the total of elementary students (table 5-8). The pupils in private elementary schooling are largely from upper and high middle class families who are able to afford the high cost of education. Although these schools have enjoyed the government's assistance, these subsidies are relatively low. However, the private elementary schools are able to employ the most qualified and experienced teachers and the best method of education. Private schooling has always been able to produce education as a privilege to the upper classes and this is not limited to the experience of a particular country¹³. Thus, a slight increase in the share of the pri-

Student Numbers By Public and Private

Table (5-8)

Classifications

Percentage

	<u>Elementary</u>			<u>Secondary</u>		
	<u>Total</u>	<u>Public</u>	<u>Private</u>	<u>Total</u>	<u>Public</u>	<u>Private</u>
1959	100.0	92.5	7.5	100.0	84.6	15.4
1966	100.0	92.4	7.6	100.0	81.9	18.1
1968	-	-	-	100.0	78.2	21.8
1970	100.0	91.9	8.1	100.0	81.3	20.7
1972	100.0	91.5	8.5	100.0	75.0	25.0
1975	100.0	91.1	8.9	100.0	82.6	17.4

Source: Plan and Budget Organisation, Statistical Year Book 1972-75.

vate elementary schooling should not be considered as a significant change in the pattern of development in the Iranian educational system.

The government has the major responsibility for elementary schooling and has been facing two basic problems, the financing of education and the lack of supply of teachers. As far as former is concerned, the share of capital expenditure (building and facilities) is not significant, even in the early stage of development, and it is the current expenditure which create the major bottleneck. For instance, the current expenditure during the Fourth Plan accounts for 80 percent of the total government expenditure in education, out of which teachers' salaries are the most important. However, the rapid expansion of public education in the rural areas has been accompanied by an increase in the capital expenditure during the Third and Fourth Plan.¹⁴

The latter has always been the most important problem. The lack of qualified teachers is basically related to the capacity of teacher training colleges and the relative attraction of the salary. Colleges which accept secondary-school graduates for one-year courses have not been able to meet the large demand for teachers. The poor salaries in education particularly compared with other jobs in the public sector has made teaching the last choice for students. This situation is related to the problem of financing education and its position in the total government expenditure. However, the problems of financing and the lack of qualified teachers have been bridged by employing non-qualified and part time teachers. Bridging the gap between supply of and demand for teachers, particularly, in the rural areas, by expansion of different one or two years courses for students of 12 to 15 years of age has reduced the quality of education to a level incompatible with the education in the urban areas. Although, in this way, the problem of low salaries may have been solved and a sort of localization in the education (in the sense of more contribution by the local people) has

been created, in the long run this will generate a large gap between urban and rural education and it will reduce the degree of success for rural students in secondary education.

Another source of supply of teachers for elementary education is the educational corps men. Some of the secondary school graduates receive a six month training, the compulsory military service, and they work under the Ministry of Education for 18 months. However, the lack of experience, and the compulsory and short-term nature of the teaching have reduced the quality of education, although it could solve the problem of low salaries. This and the above show that the aim of the government in providing elementary schooling in the rural areas has been largely the provision of minimum literacy rather than preparing a base for secondary education.

Although the quality of elementary education in the rural areas is far lower than that in the urban areas and particularly large cities, the supply of elementary schooling has been sufficient to cover the whole country. Thus, the low percentage of enrolment in the rural areas and to some extent in the urban areas, cannot be attributed by the mere lack of supply of elementary education. In 1971 around 43 percent of the 6-13 year old population was enrolled in schools in the whole country, but this percentage had increased to 75 percent on 1976 (table 5-9). When breakdown figures are considered, the rural areas have the worse position. Only 58 percent of the above age group in the rural areas was enrolled in schools in 1976, compared with 98.6 percent in urban areas. The rapid increase in the percentage of enrolment during the last two years has been due to the large government subsidies in the form of free meals for elementary students, which has reduced the cost of education borne by families. However, according to the ILO¹⁵, around 89 percent of 6 year olds in large cities, 80 percent in small towns and 71 percent in the rural areas enrol in schools, but the drop-out rates are substantial. The figure for 1972 shows that only 47 percent of 6-9 year olds

Population in 6 - 13 Age Group And
Numbers in Schooling ¹

Table (5-9)

Thousand Persons

	1971	1973	1976
A - Population in (6 - 13) Years Old	6932	7308	7867
Urban	(2774)	(3007)	(3351)
Rural	(4158)	(4301)	(4516)
B - Population Of Schooling in (6 - 13) Year-Old Group	3022	4039	5928
%	(43.0)	(55.3)	(75.3)
Urban	(1849)	(2293)	(3285)
%	(66.6)	(76.2)	(98.0)
Rural	(1173)	(1746)	(2643)
%	(28.2)	(40.6)	(58.5)

Note : 1- Percentage share indicate the ratio of A/B .

Source : BMI, Annual Report, 1974 - 6.

in the urban areas and 22 percent in the rural areas were enrolled, which is far lower than the figure for the 6 year old population. It shows that the major drop-out rate is in the first three years of schooling. The reason can be seen in the position of families in Iran (see PP.325-28).

Secondary Education

The private sector has played a more important role in secondary education than in elementary education. In 1975 around 17.4 percent of students in secondary education enrolled in private schools (table 5-8). A similar argument to that of elementary education may be valid for the existence of private secondary education. These schools have always been subsidized through the general budget. Since 1974-5, the total financing of private schooling has been undertaken by the government and the cost of education (in the form of high tuition fees in private schools) may no longer be a source of discrimination against the low income families. Although, the discrimination may still remain due to the different schools' policies, the total existence of this system is more questionable because it is largely dependent on the possibility of financing the educational system. The large increase in oil revenue during 1974-6 made the financing possible, but whether it can be a permanent scheme is in doubt. For the present time, it can be regarded as a sort of subsidy to the middle class families who demand the private schools as the source of privileged education. As the result of the government's policy, the supply of secondary education has become its own responsibility totally.

Generally, the government has been confronted with a similar but more serious problem to that of elementary education. The supply of teachers is more inelastic and the salary as the determinant of the supply of teachers is more important. The supply is inelastic due to the low capacity of teacher training colleges at the university level. The only university of teacher training (Daneshsara-e Alli) with a capacity of 600 graduates a year can not meet the national demand for teachers. Moreover, the large opportunities

for university graduates make the supply of teachers more elastic relative to the salary payable for different jobs. The low level of salaries even makes "... the student of teachers' training colleges and Honeresara-ye Ali Narmak (Narmak Technical College) (not inclined) towards employment in the Ministry of Education especially those in science and technical courses,...."¹⁶ Contrary to elementary education, the expansion of short-term courses for holders of lower qualifications is not possible, due to the nature of the curricula of secondary education. Thus, solving the problem of low salaries and financing in secondary education by the expansion of short-term courses, seems to be out of question and the lack of teachers has become the major bottleneck. The limited supply of teachers has made the expansion of secondary education into the rural areas almost impossible. This has increased the role of families in providing the necessary education to a vital point. Secondary education for rural families is only possible if they can afford the extra cost of living for their children in the nearest town or city.

While the expansion of secondary education has been a major problem and the lack of qualified teachers has been enormous, the introduction of the new educational system has accentuated the problem. The aim of the new system is to bring about a change in the educational system to adjust to the existing economic conditions. To do so, technical work has been emphasised. While according to the past system, the yearly examination was the main criteria for promotion, the new system has given the power to the school to determine the branch of study, during the three years of orientation, for the four years of upper secondary schooling¹⁷. The school particularly can determine who can carry on with his study to higher education and who has to go to different technical and vocational training. In fact the new educational system has introduced a compulsory technical and vocational training into secondary schooling. Also, in this system, the existing

entrance examination for university and higher education is to be eliminated. To be brief, school as an educational institution determines the potential division of labour before individuals actually come to the labour market.

To put the complicated educational system into practice, qualified and experienced teachers as well as administrative staff are needed, and a lack of this has been felt throughout the years. However, as the result of different educational levels in the rural areas, small towns and large cities, the system has resulted in an atmosphere of confusion for children, parents, teachers and administrative staff and it is still not known whether the system can work. This confusion is particularly strong since it is believed that decision making under the existing social circumstances may be deliberate and affected by the influence of families.

However, the considerable cost of providing equipment and retraining courses for teachers has already been created. Theoretically, compared with the old system, the only advantage of the new system is that it can provide a possible technical and vocational training for the school-leavers in the secondary schools. The rate of drop-out for the first year of the secondary school was approximately 54 percent in 1970¹⁸. If the aim is the introduction of compulsory technical and vocational training into secondary education, it may be confronted with the same problem which the existing technical schools are facing that is children or parents may refuse to accept the technical training as the only alternative to higher education. Moreover, the new educational system may not only be unable to expand the secondary education to the rural areas, but also the need for higher capital expenditure due to its technical nature and the necessary qualified manpower attached to the technicality of the profession, may even jeopardise the existence of secondary schooling in small towns. Thus, it may aggravate the problem of a sufficient supply of secondary education.

Technical and Vocational Training

Technical education in Iran varies from industrial education to rural vocational training including art and crafts. The number of students has rapidly increased during 1970-75. This increase in technical education has been largely due to the introduction of the new system. The number of technical students has increased from 19059 people in 1968 to 151588 in 1975, of which the new compulsory technical education accounts for 30 percent. Its share in the total secondary education has increased from 2.3 percent in 1968 to 17.7 percent in 1975 (table 5-10).

The development of technical and vocational training in Iran shows that service education has increased very rapidly. Its share in the total of technical and vocational students has risen from 9.6 percent in 1968-9 to 31.7 percent in 1975 (table 5-10). When the breakdown figures for the old and the new system are considered, service education accounts for 43 percent of technical education under the new system while its share was not more than 29 percent in the old system in 1974-5. (table 5-11). This shows that the new system has largely expanded the service education which ranges from commerce and banking to secretarial and hotel staff training. About 90 percent of girls in technical education were involved in service education in 1975.

Industrial education has not received considerable attention, although in the last two years the number of students in industrial education has more than doubled. This trend has been the same for all branches of technical and vocational training due to the compulsory nature of the new system and the relative increase in government expenditure in education at the aggregate level. However, industrial education suffers from both the lack of supply and the lack of demand. As far as the former is concerned, lack is affected by the higher capital expenditure related to industrial education (such as different sorts of machines, tools and buildings) and thereby

Technical And Vocational Training
By Type¹

Table (5-10)

Percentage

	Industrial Education	Service Education	Rural Vocational Education	Total ² Students
1968	88.5	9.6	1.9	100.0
1970	86.3	13.7	-	100.0
1971	83.5	16.4	-	100.0
1975	56.8	31.7	10.5	100.0

Note- 1- The share of technical and vocational training in the total secondary students was 2.3 percent in 1968 and 17.7 percent in 1975.

2- Number of Students in Technical and Vocational Training rose from 19059 people in 1968 to 151588 in 1975.

Source: Plan and Budget Organization, Statistical Year Book 1973-75.

Distribution of Technical and
Vocational Students By New and
and Old System in 1974-5

Table (5-11)

Percentage

	New System	Old System	1
Industrial Education	36.8	65.7	
Service Education	43.2	29.1	
Rural Vocational	20.0	5.2	
Total	100.0	100.0	

Source: Plan and Budget Organization, Statistical Year Book 1973-75.

the higher cost of education per student, and the insufficiency of qualified teachers for industrial education. This is particularly significant due to alternative opportunities available to skilled manpower.

The demand for technical training is limited, on the one hand, because demand for graduates from these schools is limited. This is so, because courses offered by the technical schools do not correspond the current industrial needs. On the other hand, the social status attached to the 'white collar' jobs makes 'blue collar' work look unattractive ; and the middle class families, in particular, are reluctant to accept technical training. However, the difference in the 'white collar' and the 'blue collar' job is largely due to the difference in the income rather than mere social status(see pp331-7).

Higher Education

Higher education in Iran shows a high rate of growth during 1967-76. Its share in the total enrolment has increased from 1.1 percent in 1967 to 2.4 percent in 1976, but is still relatively low. The annual growth rate of enrolment in higher education was 20 percent during 1967-71 and it declined to 11.6 percent in 1971-76 period (table 5-12). The lower rate of growth during the latter period can be attributed entirely to the lack of supply because the annual demand for higher education is extremely high and only around 15 to 20 percent of applicants can enter the higher educational institutions. The high demand for higher education is related to high salary and the social status attached to the 'white collar' jobs in Iran (see pp 331-7).

The lack of supply is affected by the budgetary constraint and the structure of demand for university graduates in the labour market. These factors have affected the composition of higher education both with regard to the field of study and the level of education . The budgetary constraints penalized those fields with higher cost of education per head such as,

Share of Higher Education and Technical
and Vocational Training in Total Student

Numbers

Table (5-12)

	1966	1971	1975	Person	
				Annual Growth Rate	
				Percentage	
				1966-71	1971-76
Higher Educa- ¹ tion %	32440 (1.1)	97338 (2.0)	151505 (2.4)	20.0	11.6
Technical and ¹ Vocational %	19956 (0.5)	47451 (1.0)	151588 (2.4)	24.3	47.3
Total Students	3025773	4821278	6329356	9.6	7.0

Note-1- () show percentage share in the total students.

Source: Plan and Budget Organization, Statistical Year Book, 1972-75.

Distribution Of Students in Higher Education
By Specialization

Table (5-13)

Percentage

	1967	1971	1975
Total	100.0	100.0	100.0
Social Sciences	14.2	22.0	20.0
Humanities	28.9	22.0	17.0
Engineering	9.4	18.0	22.0
Medicine	17.2	10.0	12.0
Natural Sciences & Mathematics	9.7	16.0	16.0
Agriculture	3.5	4.0	5.0
Fine Arts	4.5	3.0	3.0
Educational Science	7.7	3.0	3.0
Law	4.5	2.0	2.0

Source: Plan and Budget Organization, Statistical Year Book, 1972-75.

engineering, natural science and medicine, despite the high demand for them in the labour market. It has been estimated that the capital cost per head for the above courses is five times as high as that of the social sciences¹⁹.

The relatively higher rate of growth of social science during 1967-71 can be attributed to the budgetary constraint which has penalized other fields of studies with the higher cost per head, on the one hand, and the expansion of government agencies which created a substantial demand for social sciences' graduates, on the other hand. The relative change in the pattern of higher education during the 1972-76 period has been due to the lower rate of growth of humanities and the expansion of short-term courses. The share of humanities in the whole of higher education has declined from 28.9 percent during 1967 to 17 percent during 1975-6 (table 5-13). This was largely due to the unsuitability of expanding of this group felt by the government.

The growth of short-term courses is noticeable. The share of these courses in higher education has increased from 33 percent in 1972-3 to 45.2 percent in 1975 (table 5-14). These courses seem to be suitable to the structure of the industrial sector which largely demands medium level technicians. Relatively, the short-term courses have become a substitute to the degree courses. This change is particularly important in engineering, natural sciences and humanities. However, despite the expansion of short-term courses, the lack of supply compared with the demand for higher education is significant. But the question is whether or not the increase in the supply of higher education in order to meet the demand is a rational investment with regard to the structure of economy. In this respect it is related to the employment situation in Iran (see pp 331-37).

5-2-1-2 Demand for Education (the Role of the Family)

The family as a socio-economic unit, which provides the necessities

Distribution of Students in Higher
Education By Field of Study and
Degree

Table (5-14)

Percentage

	1972			1975		
	Short- Courses	Degrees	Total	Short- Courses	Degrees	Total
Total	33.5	66.5	100.0	45.2	54.8	100.0
Social Sciences	15.5	84.5	100.0	15.1	84.9	100.0
Humanities	33.9	66.1	100.0	51.7	48.3	100.0
Engineering	65.5	34.5	100.0	71.2	28.8	100.0
Medicine	33.0	67.0	100.0	34.2	65.8	100.0
Natural Sciences & Mathematics	25.3	74.7	100.0	49.0	51.0	100.0
Agriculture	43.3	56.7	100.0	35.9	64.1	100.0
Fine Arts	30.8	69.2	100.0	42.6	57.4	100.0
Educational Sciences	37.3	62.7	100.0	12.0	88.0	100.0
Law	12.4	87.6	100.0	29.7	70.3	100.0

Source: Plan and Budget Organization, Statistical Year Book, 1972-75.

for a child, ranging from food to amusement, has to bear the cost of education. On the one hand, education is an extra cost to the family budget, whilst on the other hand, it is a determinant of the opportunity cost for investment in education versus sending a child to the labour market. The latter is an independent determinant from the supply of education. It has rightly been argued that under capitalism, 'the family cannot be a site of the training of the labour force because it is not economically self-sufficient,... (and thus)..., the training of the labour force necessarily means the training for employment outside the family.'²⁰ However, one can further argue that the position of the family determine the site of training, that is, the work places or educational institutions. And it is the difference between the site of training which ultimately distinguishes the 'white collar' and the 'blue collar' occupation. This is not to say that all who receive training through educational institutions would receive a 'white collar' job, but, at least, it can provide an opportunity for climbing the hierarchy of occupation to the top.

From the family point of view, primarily, what makes educational training distinct from the work place training is that the former is a sort of long investment while the latter is a direct training for occupation and at the same time is a source of income earnings. Thus, the ability of the family to bear the cost of education, including the actual cost of schooling and higher education as well as foregoing the opportunity of earnings in the mean time, is the main determinant of demand for training through educational institutions. While the direct cost of education may be affected by the supply of education, the opportunity cost of education is determined by necessity of present consumption relative to the higher consumption in the future. For a peasant family which lives at subsistence level, the present consumption is necessary for perpetuation of the family's life and the cost of education is high enough to accept a direct training in the work place

for his child. A similar condition exists for a working-class family (a work place can be anywhere from a peasant farm to small work-shop to a large firm, and the unity or separation of consumption units from production units may not make any difference to the opportunity cost of education).

The impact of the supply of education on the determinant of opportunity cost is insignificant while its effects on the direct cost of education is considerable. Thus, the expansion of the supply of education may be faced with the lack of demand from families due to a low level of income. This effect can clearly be seen from table (5-15) which shows that the share of 10-14 year olds in the total employed labour force had not changed during 1966-72 despite the rapid expansion of educational institutions. Its share has remained stable at 9.5 percent of the total employed population. However, the effect of the supply of education can be seen from the figures of the enrolment of 6 year old children. As was mentioned before, around 75 to 90 percent of the total of 6 year olds enrol in schools, but the rate of dropout during the first three years is very high. This shows that schools can absorb young children before the age accepted by the families as the working age and the high rate of dropout indicates the significance of the opportunity cost of education for families. Unless a generous public education system which can provide the cost of living for students and give equal opportunities to all be provided, children, the demand for training through educational institutions would be limited to the improvement in the income position of peasants and workers' families. Under existing conditions the middle class families, who can already afford the investment in education, benefit the most.

5-2-1-3 The Effects of Education

Productivity

The relationship between education and productivity is not clear. Although an improvement in the overall productivity of different sectors of

the economy can be observed, there is no way to distinguish the effects of technological improvement on the total productivity from those of educational improvements. A better use of tools or machinery due to the new method of training can show the direct effects of education. But the question is the relation between the ordinary educational system and productivity rather than technical training or technical learning in the process of production. The latter which increases productivity can be learnt without any ordinary schooling and literacy is not necessarily related to technical learning.

Historically speaking, man has been able to develop the tools he worked with long before he was able to read or write. While technical training may not be directly related to literacy when the organization of production is simple, the complexity of the organization of production attached to the modern technology makes industrial relations more complicated. This complexity of industrial relations and 'technical communication' ranging from technical orders to technical understanding calls for literacy. However, even at this stage as Landes says '... , a large share of industry can be performed by illiterates, although certain workers-supervisory and office personnel in particular- must be able to read and do elementary arithmetic operations in order to perform their duties.'²¹ Thus, compulsory elementary education may not directly affect overall productivity, but its indirect effect is most certain since it can provide a foundation for more advanced work and it tends to facilitate and stimulate mobility and to ease the selection of talent to fit the needs of the society when industrial relations are becoming more complex. This is why some economists have found that in the early stages of industrialization elementary education has considerable effects on total productivity.²² At least in Iran, the manager of Kazvine Development Authority estimated that the cost of a scheme would have been reduced by 40 percent if all agricultural workers in the area had been literate²³. An interpretation of this statement is the higher productivity

of literate workers.

While elementary education has the general advantage of literacy, ordinary secondary schooling not only has no direct effect on productivity, but also its indirect effect is in doubt and it is mostly focused on preparation for higher education. Although the new educational system emphasises the technical training during the secondary schooling, a large percentage of students is still prepared for higher education. Those who receive higher education would be expected to have the same effect as that of vocational and technical trainees on productivity. But with the high rate of early school-leavers, secondary schooling may not be considered as an effective educational course unless the school leavers receive complementary vocational training. However, the ordinary secondary education creates an upgrading in the overall level.

The greater complexity and precision of manufacturing equipment and the closer control in order to reduce the inefficiency as well as the higher standards of technical knowledge, especially in the upper level of the productive hierarchy, call for well qualified and trained manpower. Thus, the most direct effects on the productivity can be expected from the technical, vocational and higher education²⁴. These courses are related to occupation and the capacity for training in the courses is the main determinant of the supply of qualified, skilled manpower. The bad performance of these courses may reduce the total productivity of skilled manpower. When private enterprises in Iran refuse to employ graduates from technical schools, it indicates that the productivity of workers so trained is lower than is expected. Although the share of technical training and higher education has increased from 1.6 percent in 1966-67 to 4.8 percent in 1975-76 (table 5-12), the type of courses (the large share of service education in the technical and vocational courses and social sciences and humanities in higher education) and the low quality of training have reduced the potential effect of the

educational system on total labour productivity.

Structure of Employment

Educational institutions function as an intermediary in the labour market to balance the demand for and the supply of skilled manpower. In this respect, the degree of effectiveness of the educational institutions depends upon two factors: Firstly, the degree of coverage of the educational system, that is, training through educational institutions versus training in work-places. Secondly, the extent to which the existing imbalance in the labour market is due to the structure of the labour market. Here, we make a distinction between two different types of imbalance, the 'aggregate' and the 'structural' ²⁵. The former is a type of imbalance in which the supply of labour at the aggregate level exceeds the demand for labour. The latter is the one in which the pattern of supply does not match the pattern of demand due to the differences in the place of occurrence of supply of and demand for labour or the requirement of special skills. The educational system may be effective only in the case of structural imbalance and particularly when the imbalance is due to the required skills.

In relation to the first condition, we are concerned with technical training which is directly related to occupation, rather than with the general education. Technical training through the educational institution in Iran is insignificant. In this respect, the supply of technical education cannot be the only factor responsible, since the pattern of demand and the traditional work-place training has a significant position. Due to the industrial structure of the Iranian economy in which the small-scale industries play the dominant role in employment, the demand for school-trained graduates is low. The small-scale industries with an average of three workers traditionally prefers to employ their own trainees. The high share of 10-14 year olds workers in the total employed population shows the above tendency. When the structure of the employed population by occupation is considered, the

share of 10-14 year olds is important for both agricultural and industrial workers. The share of the 10-14 group in the total employed population in the above occupations has increased from 6.1 percent for agricultural labourers and 6.5 percent for industrial workers in 1956 to 11.2 and 10.2 percent respectively in 1966; and the 1971 data even shows a higher estimate (table 5-15). The development of the industrial sector, particularly the small-scale industries and the agrarian reform have been the main factor for the rapid increase in the share of young workers.

However, the low demand for school-trained graduates from the small-scale industries is not due only to the low level of training in the educational institutions, but it is also a resistance against education. The industrialists who fear that education would lead to disclosure of the secrets of their business, which has given them a privilege, prefer to employ their own trainees. This situation allows them to have a better bargaining position against their employees. Due to the above factor, generally, the level of wages in the small-scale industries is lower than that of large-scale industries for similar jobs. With the low demand of small-scale industries, the effect of education on employment is largely limited to the expansion of the large scale industries, which are the main source of demand for technical graduates. Technical and vocational training is related to the large enterprises and an understanding of their needs would help to provide them with the necessary skilled manpower. The bad performance of technical schools at the level of secondary education has led the large enterprises to choose university graduates to perform the job rather than the school graduates.

The above pattern of demand shows that technical training cannot be attractive to students, partially because of the limited demand for school graduates either due to the attitudes of the small-scale industries or due to the bad technical training, and partially because of better prospects for higher education graduates, both due to the higher demand for them and

Share of Employees Of 10-14 Years of Age In
Total Employed Labour Force By Activity

Table (5-15)

Percentage

Group of Activity	1956	1966	1971
Total Employed Population	5.8	9.6	9.8
Professional and Technical Workers	2.1	0.5	0.4
Administrative and Managerial Workers	1.0	*	0
Sale Workers	1.7	2.0	1.0
Service Workers	9.2	12.8	7.9
Agricultural Workers	6.1	11.2	12.5
Production Workers	6.5	10.2	10.7
Not Adequately Described	1.9	6.7	4.6

Source: Plan Organization, 1956 and 1966 Population Censuses; Ministry of Labour, The Result of Manpower Sampling in 1971.

Distribution of Employed and Unemployed
Population By Year of Schooling

Table (5-16)

Percentage

Year of Schooling	1966		Percentage Share of 1/ 1 + 2	1971		1972
	Employed (1)	Unem- Ployed (2)		Employed	Unem- Ployed	Employed
No Schooling	73.0	75.5	10.0	-	-	66.7
1 to 6 Year	20.2	16.7	8.1	-	-	24.7
7 to 12 Year	15.4	7.4	12.9	-	-	6.9
13 and Over	1.0	0.3	2.8	-	-	1.5
Not Clearly Stated	0.3	0.1	-	-	-	0.2
Total Employed	100.0	100.0	9.7	-	-	100.0
Total Active Population	91.3	9.7	-	89.1	10.9	-

Source: Plan and Budget Organization, Statistical Year Book, 1967-76.

the higher income earnings. The low demand for technical training in secondary schools explains the rational reaction of educational institutions to the demand for technical education under the existing conditions. In this respect, the rapid expansion of service education indicates the reaction to the demand for service occupations which can be observed clearly from the high share of the service sector in the GDP and its rapid expansion. Therefore, the pattern of development of the industrial and service sectors has determined the pattern of demand for skilled manpower.

The above also explains the high demand for higher education, but the question is whether or not the Iranian economy is able to absorb the graduates from higher education. Although the lack of demand for university graduates has not been strongly felt, its expansion may be limited to the development of large scale industries on one hand, and particularly the expansion of the public sector on the other hand. The 1971 data on the employment situation in Iran shows that only 1.5 percent of the employed labour force has received higher educational training which is relatively low (table 5-16). According to the 1966 data, the rate of unemployment for university graduates is not more than 2.8 percent. With the same rate of unemployment at the aggregate level in 1971, no significant change in the structure of unemployment can be expected. However, this low rate of unemployment may have been due to the limited supply of higher education. Each year, around 80 percent of applications for higher education are rejected which shows that the restricted supply has reduced the rate of unemployment for university graduates.

While the limited supply of higher education has become a buffer for the unemployment problem at the university level, it has put more pressure on secondary school-leavers and graduates. The unemployment rate for the 7-12 grades in schooling has been around 13 percent in 1966. To some extent it has been due to the large percentage of ordinary education and the bad

performance of technical schools, but, largely, the middle-class attitudes toward the 'blue collar' jobs can be blamed²⁶. The students resistance against manual work is strongly backed by the middle-class families who are able to support their children until they find a place in higher educational institutions or find a clerical occupation. Even in this respect, the families' understanding of the situation may not be irrational for the difference between the wage level for 'blue collar' and 'white collar' jobs is significant; and it reduces the opportunity costs which the middle class families have to bear when they support their children against being manual workers. It can be expected that the importance of social status attached to the 'white collar' jobs will decrease when an adjustment in the wage levels is made. As far as the effects of education on employment is concerned, it can be said that education has been a privilege for the middle-classes. This can be explained by the high percentage of illiterates in the total employed labour force. In 1966, around 73 percent of the employed population was illiterate; while this percentage was reduced to 66.7 percent in 1972, the relative increase was largely in the 1-6 years school group. When the total of these two groups is considered, the percentage has decreased from 93.2 to 91.3 which is insignificant (table 5-16).

When the source of demand for skilled manpower is considered, the rational reaction of the educational system with regard to the high percentage of ordinary schooling can be seen. A large percentage of demand for secondary school graduates and higher education comes from the government. As table (5-17) shows the share of higher education graduates in the government's permanent employees has increased from 10 percent in 1963 to 13.1 percent in 1971 and rapidly increased to 23.1 percent in 1975. This shows that the government has been the major employer for the higher educational graduates, particularly compared with 1.5 percent, the share of higher education in the total employed population. And around 41 percent of government

Distribution Of Government Permanent Employees
By Year Of Schooling

Table (5-17)

	Percentage				
	1956	1963	1971	1973	1975
Less Than Diploma Under 12 Years Schooling	93.5	90.0	43.5	42.6	35.6
Diploma 12 Years Schooling			43.4	41.6	41.3
Higher Education	6.5	10.0	13.1	15.8	23.1
Total	100.0	100.0	100.0	100.0	100.0

Source : Plan Organization, Statistical Year Book, 1967 - 76.

employees have received complete secondary education which is far higher than the national average i.e. 6.9 percent. However, the high percentage of unemployment in the secondary education, to some extent, has been due to the attraction of the public sector. One may argue that the enlargement of the public sector tended to favour employment for clerical and administrative workers. Since the balance of job opportunities has shifted more in favour of clerical employment, there is a mounting demand for the academic secondary schooling which has provided an excess in such positions²⁷.

The new educational system may not be more effective than the old one when the pattern of demand is considered. The new system has already emphasised service education in secondary schooling which is not different from academic secondary education. To be brief, the distribution of qualifications in the labour force has been a response to the structure of occupation in Iran, and to this extent has been effective. And the solution to the problem of employment should be sought at the aggregate level and the structure of the economy on the one hand and in the wage differential on the other.

5-2-2 Health Service

Introduction

In Iran, like most countries, both the private and the public sectors are involved in the provision of the health service. The importance of the public sector in the total supplied health services has risen, particularly since 1973, after the rising of government revenue, rapidly. However, the health service has not received the attention it deserves. Here, we will discuss the health situation and effects of government expenditure with regard to the health sector on two grounds:

a) Provision of a health service by the government- Whether the supply of a health service has been sufficient to meet the need of the country and how the government has distributed its expenditure in this sector.

b) Productivity – What have the effects of health on the productive capacity of economy been ?

Provision of a Health Service by the Government

In the evaluation of the government expenditure with regard to the health sector, among many problems there are three in particular which should be considered at the aggregate level. First, is the government intervention in the provision of health service necessary ? Secondly, if the total health service be provided by the government, how much should it spend on the provision of such service ? Third, what factors determine the amount to be allocated to the health sector and how should it be distributed ? As far as the first question is concerned, one should distinguish between sanitation and preventive services, and the medical treatment. The first group by its nature is not provided by the private sector. One may say this group is the one which best fits the 'public good' qualifications, externalities, indivisibility and collectiveness. Therefore, the intervention of the government in the provision of such services is necessary because of their nature. It is the second group which is not necessarily based on the social choice, but, mainly depends on individual demand.

The question is that whether the medical treatment should be considered as a 'need' or 'demand'.²⁸ If the former is accepted, it means that medical treatment should be considered as a 'public good' and therefore it should be financed publicly. If the latter is accepted, government intervention would be limited to what would be determined by the market mechanism and wherever, the private sector is not active. However, there is considerable agreement among economists that the health service should be provided on the base of 'need' rather than 'demand'.²⁹ The main argument is that there are several reasons which distort consumer rationality in the health sector, the factor which is to take care of maximization of resources

in a market economy:³⁰

a)- The consumer's ignorance- Health as a commodity has different characteristics from other products. Consumers who seek medical treatment usually do so before they know how much cost they will be incurring³¹. Also, they do not know what they are buying and consumers are highly dependent on the producer for information concerning the quality of a product³². In this respect, one study shows that physicians make decisions reflecting their own preferences, though constrained by out-of-pocket cost to the consumer³³.

b)- Restrictions on Competition- Several restrictions on the entry of a new physician to the market are assured through the medical profession's control of medical schools, licensing requirements and hospital appointments³⁴. In developing countries, the small capacity of medical schools has also created a natural restriction to new entry. These factors have resulted in a very high wages for the medical profession and has increased the cost of medical treatment to every individual where ever the cost has been borne by a patient individually. In developing countries, the cost may be so high, relative to the consumer's ability to pay that the need for medical care may not be reflected in effective demand at such price. Therefore, the private sector may not expand its activity beyond the provision of a health service to particular income-groups. In this respect, while the 'need' is genuine, it cannot be materialised due to the low-income of consumers and the high price of the health product.

The above reasons indicate that medical treatment should be considered as a 'need'. However, need is a relative and not an absolute concept³⁵. There is no finite allocation of resources that could eliminate all health care needs. If there exists such relativity, the demand and supply should be matched by some medical agencies or experts³⁶. However, the expert's opinion is not based merely on medical needs for the patient, but, it is also affected by the actual level of provision of health service. In practice, need seem-

ingly tends to grow in line with provision, as doctors react to any expansion in supply of realigning their conception of need further along the possible continuum³⁷. Therefore, there is no limit on the need for medical care and the only restriction on the provision of a health service is the budgetary constraint where ever the necessary manpower is available.

The above explanation shows that government intervention is necessary, if the 'need' is accepted as a base for the provision of medical care and preventive services. This brings us to the second and third questions, that is, how much should be spent on the health services and how should it be distributed. There is no a set of established criteria for the amount that should be devoted to a health service. Nevertheless, there is considerable agreement that the share of national income which is spent on the health increase along with the rising of income per capita. It is now usual for economically advanced countries to devote 6 to 7 percent of their gross national products to direct health care expenditure. In poor countries the comparable figure is very likely to be closer to 2 to 3 percent of GNP³⁸.

However, these figures show the actual share which has been spent on the health service and not what is needed. It is true that the rising of income would raise the margins that can be devoted to the health sector. But, it is very likely also that a country with a high income per capita would inherit a cheaper and larger stock of health from the past which reduces the share of income that should be allocated to provision of health service. For low income countries, the small stock of health may call for a higher share to be allocated to the health service. This may reduce the importance of income as a determining factor in the allocation of resources to the provision of health service. One may argue that as far as the allocation of government expenditure to different government services is concerned, since there exists a budgetary constraint, the share of health service is determined by the trade-off between different government expen-

ditures. As we have explained in part one, such a trade-off is strongly affected by socio-political factors. In a democratic society, the ballot box may reflect the need for a particular service and determine its share in total government expenditure. In most developing countries, the lack of such a democratic process distorts the pattern of government expenditure (see part one). Therefore, in Iran the political structure of the society may have been the major factor responsible for such a low government expenditure on the health service. The government's allocation for health has not even kept pace with that of the rising of GDP and consequently its share in the GDP declined from 1.7 percent in 1966 to 1.0 percent in 1973. Although since 1973, its share has risen, it is still below the 1966 level (1.4 percent in 1976). This shows that the rising of income per capita has little effect on the share of health service (table 5-6).

Although the relative importance of the health sector has been undermined in the allocation of government expenditure, the rapid rise in the government's revenue has benefited this sector with regard to the per head expenditure during the 1970's. In particular, a sharp increase in the per head government expenditure on health can be seen during 1973-6. For instance, the per head expenditure has risen from 350 Rls. in 1966 to 583 Rls in 1973, to 1240 Rls in 1974 and 1857 Rls. in 1976. However, the rapid rise in the later years may be misleading since they are affected by the high rate of inflation during 1973-6. At constant prices, the per head expenditure in 1976 is not more than 661 Rls. in comparison with 441 Rls. for 1973. However, the per head expenditure does not say anything about the distribution of government expenditure and its incidence (table 5-18).

With regard to the distribution of health service, one may argue that since the health service should be regarded as a 'public good' and should be financed publicly, therefore, an equal distribution of such government expenditure must be ensured. However, the data on distribution of expenditure to

Distribution Of Expenditure On Health
By Programme And Per Head Health Expenditure

Table (5-18)

Billion Rials

	1969	1972	1973	1974	1975	1976
Total Health and Treatment	9.8	13.6	18.2	39.7	51.2	62.4
%	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)
Treatment Services	6.6	7.6	10.4	17.1	20.5	28.7
%	(67.3)	(55.9)	(57.1)	(43.1)	(40.0)	(46.0)
Preventive Services	2.1	2.2	2.7	5.3	6.5	8.5
%	(21.4)	(16.2)	(14.8)	(13.3)	(12.7)	(13.6)
Rural Treatment and Preventive Services	-	2.4	3.0	4.2	5.6	6.7
%	-	(17.6)	(16.5)	(10.6)	(10.9)	(10.7)
Family and Population Control	-	0.7	0.9	1.3	1.9	1.9
%	-	(5.1)	(4.9)	(3.3)	(3.7)	(3.0)
Nutrition Programme	-	0.1	0.3	10.7	15.4	14.5
%	-	(0.7)	(1.6)	(26.9)	(30.1)	(23.2)
General Services	1.1 ¹	0.6	0.9	1.1	1.3	2.1
%	(11.3)	(4.4)	(4.9)	(2.8)	(2.5)	(3.4)
Per Head Expenditure (Rls) At Current Prices	350	447	583	1240	1556	1857
Per Head Expenditure (Rls) At Constant Prices	308	365	441	750	563	661

Note : 1- Including 0.5 Billion Rials joint Hygienic and treatment services.

Source : Budget Acts, 1970 - 77; BMI, National Income Of Iran; and Plan and Budget Organization, Statistical Year Book of Iran, 1976 (2536).

different sectors in detail is not available. Here, we explain the situation to the extent that the budgetary allocation and distribution of health personnel allow us to do so. In the aggregate level, the rising share of the government health service relative to the private sector may be interpreted as a more equal distribution of the health service because while the private health service has concentrated in large cities, the expansion of public health is accompanied by the supply of a health service to rural areas. But, it is the distribution of government expenditure among different type of health services which determine the incidence of government expenditure.

Although in the later stage of development, a large share of government expenditure on health belongs to current expenditure, in the early stage of development of the health sector, the capital expenditure including building for hospitals, sanitation and preventive services accounts for a substantial share of government allocation for this sector. During the Second Plan (1955-1962), around 75 percent of the total plan allocation for health was allocated to campaign against Malaria (from which 55 percent of the people in the north and 30 percent in the south were suffering) and smallpox. Only 14 percent was allocated for the construction of hospitals mainly in large cities³⁹. Since a large share was spent on preventive services, the incidence should be considered as equal because of the 'public good' nature of the spending. However, with the rising of health stock, the government has devoted more to the health care which mainly served the urban areas. During the Third Plan, the government allocation for preventive services declined to 63.7 percent and that of investment in hospitals rose to 27.3 percent⁴⁰. The trend continued during the Fourth and Fifth Plans, the allocation of government expenditure to treatment services increased, out of which the urban areas received a large and rising share of it. During the Fourth Plan 57 percent was allocated for the treatment services. More detail information about the distribution of government expenditure in rural and

and urban areas has been provided in table (5-18). As this table shows in 1972 only 17.6 percent was directly allocated to rural treatment and preventive services. The per head expenditure of health service in the rural areas was 138 Rls. in comparison with 750 Rls. in the urban areas. The figure for 1976 indicates that the situation in the rural areas has deteriorated relative to that of urban areas that is the per head for rural areas was 374 Rls. in comparison with 2371 Rls. in urban areas. The above pattern explains that with regard to treatment services, the government expenditure has benefited the urban areas while the majority in the rural areas has been neglected. Still, one may argue that the high degree of concentration of health in cities and towns may reduce the cost of treatment and also allow it to be utilized by the rural population. However, taking into account that Iran is a large country with a scattered population where the cost of transport is high and its rural population poor, the utilization of hospital facilities by these people is out of question. In such a country some degree of 'thinness' may be useful in order to serve the rural population⁴¹.

Also, the same table shows that with the rising of government revenue, since 1974 around 26.5 percent of government allocation to health service has been spent on the nutrition programme. Such a programme can be criticised on two grounds: First, it affects only a small fraction of the population that is those between 6 to 12 years old while malnutrition is not limited to children in this group. Second, this programme may be very temporary. Although it is true that the health condition in developing countries is affected by diet and lack of nutrition, this problem should be tackled structurally through better distribution of income. However, it seems that the government has tried to grasp some popularity through its welfare programme, rather than make a genuine effort to combat the problem of malnutrition. While there is no change in the pattern of distribution of income, such subsidies can be temporary and may be easily cut back when a serious budgetary

constraint is felt.

The above pattern shows the maldistribution of health care and the temporary nature of the health programme. However, this pattern is not only affected by the government expenditure policy, but, it is also influenced by the structure of education and the reaction of the medical profession. In 1975 there was 11800 doctors and 1800 dentists who have provided the necessary service for a population of 33 Millions⁴². This means that there is only one doctor and one dentist for every 2900 and 18300 persons respectively. Although the above figures may not be low for a developing country, the distribution of doctors and dentists throughout the country indicates that around 50 percent of the former and 60 percent of the latter are in the central province (Tehran) and these percentages show an increasing trend. In some provinces there is no more than one doctor for every 11200 people and one dentist for every 120000 people and virtually all the doctors and dentists are located in cities and, therefore, the above figures would be higher for the rural areas. The lack of doctors and the unequal distribution of the health service, has been due, to some extent, to the limited capacity of medical courses on one hand, and the budgetary constraints on the other. As has been explained, the internal supply of medical doctors in the short run is fairly inelastic due to the length of the courses. Therefore, the effects of the relaxation of constraints from the educational expenditure in the last three years is still to be seen. However, this situation has created a monopolistic condition in the medical services. This low supply of doctors allows them to refuse to go to the remote areas and the possibility of high income earnings lead them to choose the large cities with a better social life. Certainly, for most doctors the choice is not based on humanitarian grounds. This has been an important reason for the concentration of specialized personnel in the Central Province, although in addition the structure of educational system with regard to the degree of coverage which has given the urban citi-

zens, particularly in large cities, the monopoly of secondary and higher education may be, to some extent, responsible. This monopolistic condition in the health service has made the private medical services more attractive, and this has led to high cost of medical services to families. Around 60 percent of doctors provides private medical services.

The above situation explains why the government has failed to persuade doctors to go to the rural areas despite the higher salary payable for rural medical services. However, since 1974 along with the relaxation of budgetary constraints, the government has been able to bridge some of the demand for medical services by employing medical doctors and dentists from abroad. Although the share of foreign doctors in the total is not more than 13 percent⁴³, it explains that the lack of medical services has not been only due to the low capacity of medical courses, but the relative insufficient allocation of expenditure to medical care is also an important factor. It shows that whenever the budgetary allocation allows, even in a short run the necessary service can be provided. These foreign doctors along with the health corps men (the compulsory military service) provide the medical service in the rural areas. Nevertheless, the lack of medical services is still enormous and needs attention both with regard to the distribution of government expenditure and to the educational opportunities for the rural population in a long run.

Productivity

To the extent that health services lead to better health, they make a contribution to the productive capacity of economy. On the one hand, it increases the supply of potential man-power through a reduction in mortality and it decreases time lost because of illness and disability. This means that the total potential productivity will increase by the rate which people are available for work. Moreover, since the productivity of labour is different at different ages, lower at the lower age group and higher in the

middle age-group, the rising of average life expectancy is an important factor in increasing potential productivity. This, also indirectly, would change attitudes towards work and savings. On the other hand, common sense suggests that better health should result in more production per man as well as more men available for work⁴⁴.

However, as far as the first effect is concerned, it is true only under certain conditions. Although health would contribute to the rising of supply of potential man-hours, the problem is that for most developing countries, the insufficient supply of other economic factors, in particular capital, may leave the potential supply of man-hours under-utilized. Therefore, if the rate of population growth is above the rising of supply of complementary economic factors, this would reduce the consumption per head as well as savings available for investment. This is particularly important since the age group up to 15 year olds is mainly consuming rather than producing⁴⁵. Therefore, the reducing of the birth rate can contribute to the future productivity by increasing the saving rate in a developing country. One estimation shows that the worth of preventing a birth in a typical LDC is about 2.6 times the output per head while the cost per birth prevented during a half decade is not more than \$ 5⁴⁶. With such a low cost, one may expect the government of developing countries to pay attention to birth control where ever surplus of labour may hamper the economic development.

Altogether, the above explanation indicates that the health services can contribute to the productive capacity of the economy by increasing average life expectancy and by reducing the birth rate which realizes more savings and raises the share of the productive age in the total population. To measure the above effects, one may use two indicators, the mortality rate and birth rate. It is worth mentioning that due to the voluntary nature of birth control, the effect of the health service is very much dependent on other social and economic considerations while the reducing rate of mortal-

ity comes as a direct effect of the health service and nutrition. Therefore, one may expect to see stronger effects in the case of reducing the mortality rate than in birth control where ever the social barriers are against it.

In Iran, both indicators register some degree of success for the health sector. The rate of mortality has decreased from 18 per thousand in 1967 to 12.5 per thousand in 1974. With the decreasing rate of infant mortality from 169 per thousand in 1967 to 102 per thousand in 1974, the total effect of the expansion of the health service could have been increasing the rate of growth of population, if the birth rate had remained stable. But, due to the higher degree of literacy and urbanization as well as an increasing average age of marriage, the provision of birth control by the government has reached a limited degree of success in urban areas. The birth rate in urban areas decreased from 47 per thousand in 1967 to 42.9 per thousand in 1974⁴⁷. Nevertheless, the success has been limited due to a low degree of literacy in rural areas, strong religious barriers and the structure of the economy (peasants may think of their children as free manpower). The health situation in rural areas in particular needs special attention with regard to both the rate of infant mortality and birth control. Still the rate of infant mortality in the rural areas is as high as 121 per thousand in 1974 which indicates the lack of a health service. Although the rate has declined during 1967-74, the success has been largely due to the campaign against major diseases. There will be more need for medical care, if the rate of mortality is to be reduced. The political structure of the society has failed to reflect such a need for medical care; and a higher share of government expenditure has to be devoted for medical services particularly where there is enough room for economising the government expenditure on non-productive sectors such as military expenditure and government luxury buildings.

5-2-3 Defence Service

In a developed economy, the determinants of defence expenditure is partially economic both due to its effects on the aggregate consumption and its effect on the employment and the production of arm industries⁴⁸. The economic determinants of defence expenditure in a developed economy can be considered as an instrument for the implementation of fiscal policy. But in a developing country, the impact of defence expenditure would be a by-product effect, a result of the socio-political determinants. The difference arises from the different nature of the problem of a mature economy and an under-developed economy. To be brief, in the former, the problems are the lack of effective demand and Keynesian unemployment. In this respect, the role of fiscal policy is the maintenance of full employment. Thus, the defence expenditure has the necessary impacts on the employment and effective demand. As far as the latter is concerned, the problem is structural due to the low productivity and lack of capital formation. Therefore, the role of fiscal policy is to ensure the necessary capital formation and to ease the economic bottlenecks. In this case the defence expenditure is not an instrument of fiscal policy, so its determinant is not subject to economic factors.

The above argument indicates that the basic problem in the evaluation of the effects of defence expenditure on the economic performance of a developing country is the separation of the determinants of defence expenditure from its effect on the economy. However, the effects of defence expenditure in a developing country can be considered in terms of 'usefulness' of expenditure and rational utilization of the factor endowments (capital and labour). In order to maximize the utilization of scarce economic factors in developing country (both capital and skilled manpower), it may be appropriate to assume that defence expenditure is economically unnecessary and one can consider only the political determinants.

The political determinants of defence expenditure leave the economists almost without any appropriate criteria to determine the maximum limit for the defence expenditure and to evaluate its effects. The common approach for evaluation of economic performance in the respect of defence expenditure is the comparative study of the share of defence expenditure relative to the GDP in different countries. The obvious problem is that the strategic situation and existing threats to different countries cannot be the same⁴⁹. It is almost impossible to find two countries with similar conditions. For instance, in the Middle East, while the Arab countries on the borders of Israel certainly have to bear a large defence expenditure due to their historical conflicts with Israel, Iran does not have a similar condition. These differences make one recognize that the discrepancies in the share of defence expenditures relative to the GDP may not be an appropriate criterion.

For the reason above we prefer to evaluate the relative importance of the defence expenditure in the process of the development in one country only. Since the strategic situation of the country and the possible threats to the country are more likely to remain unchanged during peace time, a comparison of the share of defence expenditure relative to the GDP for various years seems to be a more satisfactory criterion. In this respect, we should make a distinction between the conventional defence of a country's borders and the international burden imposed on a country by ideological conflicts. The latter can take the form of either an aggressive defence policy or an undertaking of the responsibility of security for a particular area; in both cases coverage of army activities goes beyond the country's borders. This is the second aspect which, since 1965, has called for a rising share of defence expenditure in the GDP in Iran. For instance, the sub-committee's report to the US Senate described the need for a large arm purchase in 1976 as follows. " Although Iran is arming against a number of potential threats ranging from the Soviet Union to blockage of the mouth of the Gulf (the

straits of Hormuz) and external support for separation in Baluchestan, it is clear from our discussion that factors other than operational effectiveness, such as deterrence and prestige, seem to motivate Iran's hardware purchases."⁵⁰ Therefore, since the necessity of the expansion of the army, after the stage of conventional defence, is subject to the international ideological conflicts or, as the Prime Minister of Iran has put it, it is a source of prestige and pride, any increase in the defence expenditure relative to GDP can be regarded as economically unnecessary for the purpose of defence of the country's borders. As we have seen in the earlier chapter, the ratio of defence expenditure to GDP has increased from 5.2 percent in 1965 to 14 percent in 1975⁵².

The above shows that the defence expenditure in Iran has been well above what is necessary for the defence of the country's borders; and thus, the natural and human resources allocated for defence purposes is above the limit we assume to be economically appropriate. It indicates that from the economic standpoint the allocation of natural and human resources to defence has been irrational and totally affected by the political determinants. The most important effect of defence has been depleting of foreign exchange reserves thereby reducing investment in the productive sectors and the employing skilled manpower which could be utilized in the industrial sector.

The problem of measuring these effects arises from the lack of adequate data on arms imports and technical manpower employed in the military forces. The balance of payments does not show arms imports, and it is not known whether arms imports is excluded from the balance of payments or if it is hidden in the other items; as the following figures show the latter may be the case. However, the scattered data indicates that from 1965 to 1972 arms imports have increased in average to 130 Million dollars per year⁵³. Although the annual figure for the period 1973-76 is not available and due to the 'bulkiness' of arms contracts it is not possible to workout the average

figure, the huge contract for arms imports, which reached 10290 Million dollars (from the USA only), shows that the average figure should be far higher than in the 1965-72 period. Still, the above figure excludes the government's arms purchases from Britain and the Soviet Union. In Order to determine the total foreign exchange spending for the arms purchases, one may use the general budgetary allocation for defence expenditure by uses (table 5-19). It indicates that the share of machinery and equipment, which are mainly imported, in the total defence expenditure has increased from 9.4 percent in 1970 to 44.2 percent in 1976. Comparing these figures with the total imported goods, they accounted for around 5 percent in 1970 and 25.3 percent during 1973-76. If the services related to the arms purchases are included, the share of foreign exchange paid for the arms equipments and services must have been above 30 or 35 percent of the total foreign exchange earnings.

While the above figure can explain the effect of defence expenditure on the financial resources, there is no figure available to show the effects of defence on the skilled manpower as a scarce resource. Although we cannot show the distribution of army personnel by occupation, theoretically, it is possible to say the more sophisticated the weapon in use, the larger is the need for skilled manpower. Particularly, the expansion of the air force and tank units must be accompanied by the necessary skilled manpower, otherwise, the lack of latter would reduce the utilization of the machines and equipments. This is particularly important since the quality of the army is strongly dependent on the full utilization of the capacity of weapons. This has already raised the question of whether the existing military personnel is able to use the new sophisticated weapons to their full potential. The utilization of weapons may also be affected by the lack of maintenance capabilities and the infrastructure in ports facilities, roads, rail nets and so on. Based on these factors, the sub-committee's report indicates that

Share Of Arms Machinery In Total Defence Expenditure and In Imported Goods

Table (5-19)

Percentage

	1970	1972	1973	1974	1975	1976
Share Of Arm Machinery In Total Defence Expen- diture	9.4	17.3	15.8	50.4	58.4	44.4
Share Of Arm Machinery In Total Imported Goods	5.0	9.3	7.4	27.7	22.6	25.3

Source : Budget Acts, 1970-76; BMI, Annual Report, 1970-76.

"Iran will not be able to absorb and operate within the next five to ten years a large proportion of the sophisticated military systems purchased from the US unless increasing numbers of American personnel go to Iran in a support capacity. This support, alone, may not be sufficient to guarantee success for the Iranian program."⁵⁴ The economic implication of this question is that more and more skilled manpower is to be employed in the army to increase the utility of the purchased arms and raising the defence expenditure for purchasing the necessary services for operating the army machine.

However, the very high share of government expenditure has still had deeper effects which has distorted the whole pattern of economic development in Iran. Not only it has created an atmosphere of privilege for the top army officers, but, more importantly, it has raised the power of army in the structure of decision making. This means that the political importance of such a huge military machine not only shifts the trade-off point of different government expenditures toward a higher expenditure in defence, but also, other government expenditure is tailored to contribute to the efficiency of the military machine. For instance, most of infrastructural investment in roads and buildings (see chapter 4) have been in areas where the military needed them the most. Also as was explained in chapter(4), the industrial sector too has been affected by the importance of military expenditure. These show that the Iranian economic system has altogether been tailored to serve the army.

The above pattern clearly indicates the economic irrationality of the system by undermining the necessity and importance of economic criteria in determining the effects of government expenditure. Certainly, the main reason for such irrationality has been the political system which has not been able to reflect the true importance of different social and economic needs of the majority.

Conclusion

Government services have been the main reason for the large base and the rapid growth of the service sector during the 1960-76 period. While the lack of infra-structural investment and human capital has been an impediment to the growth of some of the economic services such as transport and social services such as education and health services, the defence services exhibit sharp increase.

The lack of infra-structural investment in roads and ports has been the result of two considerations. First, the nature of the transport infra-structure which is extremely costly, exceptionally long lasting, severely indivisible and has few alternative uses. Second, the short-sighted planning which has been affected by the revenue constraint and the domination of political determinants which has pushed out the investment in infrastructure in order to finance the military expenditure. However, the lack of an efficient transport system appeared as one of the most important bottlenecks within the Iranian economy during the 1970's and one of the causes of inflation.

The government expenditure for education has been relatively low and the educational system has not received the attention it deserves. As the consequence of the budgetary constraint, the educational system has not been expanded sufficiently and the lack of supply of education particularly in secondary and higher education is enormous. The utilization of the educational capacity has also been hampered by the lack of demand for education in the rural areas which arises from the low income of peasant families. In the main, the budgetary constraint has discriminated against the expansion of supply of education to the rural areas and has widened the gap between rural and urban education and it seems that rural education is not going beyond simple literacy and cannot be regarded as a base for secondary education. Not only in the short run, has the rural areas been refused

a part of oil money and the distribution effects of government expenditure, but, also in the long run, the gap would accentuate the existing low productivity and need for specialized manpower in the rural areas. Although in the long-run, the lack of human capital may hamper the growth of the industrial and other productive sectors, in the short-run, the reaction of the educational system to the structure of occupation in Iran at the present time has been rational and effective.

Similarly, the lack of supply of health service has been enormous. While in the early years of development of the health sector, some improvements in the health stock were achieved through the provision of public sanitation and preventive services, which also reflected the public good's nature of government expenditure, in the later years by emphasising the provision of medical care in the urban areas, a large percentage of rural population have been ignored while there has been more room for more equal distribution of government expenditure and some degree of 'thinness' in provision of health service. At the aggregate level, one can say that along with the increase in importance of oil revenue and the independency of the state from its social base, the consideration of distribution effects of the government expenditure has been undermined; and the health service as one of the government functions has not been distributed equally and has been limited to a fraction of the society. The underestimation of both education and health services reflects the short-sighted planning and the political structure of the society in which the state ensure the interest of the minority of people on whom it has relied on. With the change in the political structure of the society toward the domination of the military forces, defence expenditure has been over-emphasised.

The political determinant of defence activity has given priority to defence expenditure which registered an increase of seven percent relative

to the GDP during 1965-76. The effects of such a high defence expenditure on the economy, have not only been the depletion of foreign exchange reserves and the absorption of skilled manpower in the army, but also the distortion of the pattern of industrial development and the over-utilization of infra-structures. Not only it has created an atmosphere of privilege for the top army officers, but, more importantly, it has raised the power of army in the structure of decision making. This means that the political importance of such a huge military machine not only shifts the trade-off point of different government expenditures toward a higher expenditure in defence, but, also, other government expenditure is tailored to contribute to the efficiency of the military machine. The above pattern clearly indicate the economic irrationality of the system by undermining the necessity and importance of economic criteria in determining the effects of government expenditure. Certainly, the main reason for such irrationality has been the political system which has not been able to reflect the true importance of different social and economic needs of the majority.

Note

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- 13— Collins, R., Functional and Conflict Theories of Educational Stratification, in Cosin, B.R., Education: Structure and Society, Peguin, 1977, P. 175.
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